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For the Photographer and Kinematographer

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Why I Am a Pictorial Photographer

(Number Twenty)

RAYMOND E. HANSON

THE attempt to analyse the urge to any particular line of endeavor reveals complicated and involved motives, some of which we can grasp, while others elude us altogether. Perhaps the writer's attempts at pictorial photography may be traced to a number of different causes, among which is an intense liking for the environment of the countryside and rural districts, plains, mountains, and forests. The inherent need of expression in some way will account for the urge to make a print, which, in some measure, will impart to another and recall to oneself the delight obtained from some lovely natural effect or mood. Further, the strong conviction that photography, as a medium of expression, as yet in early childhood, holds promise of a great future, is an added incentive to experimentation and exploration in this field.

Rolling clouds over sunny pastures on a summer's afternoon, the silent grandeur of the hemlock woods in winter, the delicate bloom and fringe of buds in spring, and the variegated colors and fallen leaves of autumn—such effects of nature are an urge to photographic expression.

Much that one feels strongly, for some unknown reason, seems to demand expression in one way or another, and I believe it matters little what medium is employed to conciliate this urge. If the feeling is caught and more or less coherently expressed in any medium, provided the worker has technique sufficient for the result sought, this urge will content itself insofar as the merit of the achievement and the disposition of the producer warrant.

If photography suddenly ceased to exist, the pictorialist would, without doubt, discover, probably not without some flounderings, another medium in which he would satisfy the desire, which, denied one outlet, invariably seeks another. He might compose music, paint, model, write, or design houses. All through the ages men have taken pleasure and pardonable pride in creating something to which they could point and say, "I made that—whatsoever of merit is there is the product of my ideas and skill in execution."

This mysterious urge, it seems to me, is really the reason for pictorial photography. Just why one should choose photography instead of some other medium is doubtless a matter of circumstance and contacts. My own interest came through close association with a friend who was an enthusiast with a small camera. Then an exhibition of delightful landscape prints, inadvertently encountered, added greatly to an interest already aroused. The next step was the purchase of a camera and then—all pictorial workers know the rest—spoiled plates, the occasional better one, experimentation with lenses, developers, papers, and processes, and the search for pictorial subjects. Finally one becomes articulate to a greater or less extent in the language of expression chosen. Photography can now be used as a means to an end, and the hunt for pictures overshadows the interest in technique. One doesn't stop to think of grammar when eager to impart an idea or tell a story.

The interest in pictorial work is so closely allied to a study of the habits and natural philosophy as well as the appearance of the natural objects commonly included in pictures that one is constantly stimulated to a broader study and closer observation of nature in its varying moods and phases, atmospheric and meteorological phenomena are noted, and a study of values is found both necessary and extremely interesting. Uncommon light-effects are observed. Tree-structures and habits of

growth are studied. In portraiture or figure-work, the habit of observation of character, form lighting, backgrounds, and so on, is acquired. Composition in all its ramifications becomes a fascinating and never-ending subject for study and experimentation. The pictoralist finds new fields of thought and exploration constantly opening before him, all of which adds zest to the quest and stimulates the imagination to make better pictures.

Probably the illusion that some day we may make the one great picture we are always seeking, which will satisfy in every way, is a great factor in the keeping alive of interest in the search for the pictorial. Doubtless, the perfect picture will never be made—perhaps nobody would like it if it should be: just short of perfection; could it be consummated, might be the goal at which the pictorial photographer should strive to arrive.

A factor which has done much to stimulate my own interest in pictorial work is the bromoil process. To me this is one of the greatest delights of photography. One hears the process extravagantly praised and bitterly assailed. It has been termed "not photography but painting" by the purists. The painter, in turn, may say it is not painting, all of which to me is of no interest whatsoever. It is a great source of pleasure, and pictures are made in this medium which are beautiful in tone, texture, and values throughout. Whether it is "art" or not is another question in which I have no interest. If we can find in this medium the language in which we wish to speak and it satisfies our urge to express, the inevitable label with which it must needs be branded matters not at all. It cannot add to or detract from the intrinsic merit of the bromoil.

Whether or not I have made clear the reason for my own interest in pictorial photography in the foregoing is problematical. The interest, however, still survives and is as active as ever after some fifteen years of ramblings with a camera, and certainly would be sorely missed if it ceased to exist.

Los Angeles Camera Club Scores Again

ARTHUR L. MARBLE

UNDOUBTEDLY one of the most enterprising and progressive camera clubs in the country is a West Coast organisation known as the Los Angeles Camera Club, which is affiliated with the Associated Camera Clubs of America. One of the important activities of the last-named association is an annual interchange of pictorial photographs among the various member clubs. After the exhibitions have gone the rounds, the central organisation of the Associated Camera Clubs of America judges the entries in order to point out the collection of prints that seems to excel among the contestants. In order to stimulate the best efforts of the pictorialists of America the A. C. C. of A. will award a silver loving cup to the organisation that submits a winning group of prints for three years in succession.

The pictorial photographs of the Los Angeles Camera Club have earned first place for that organisation two years in succession, and consequently the silver cup now holds an honored place in the Camera Club headquarters at the metropolis of Southern California.

Eighteen members contributed to the Interchange exhibit of 1928–1929 a total of thirty prints, which is the number required for the traveling collections of the A. C. C. of A. Readers of PHOTO-ERA MAGAZINE will recognize in the list of contributors of winning prints a number of pictorialists whose work has appeared in this and other publications. The list follows:

Fred Archer—"Cassin in the Cave of the Forty Thieves", "Majel Coleman", "The City of Brass".

Julius Cindrich—"The Road to the Sea", "Architectural".

Fred R. Dapprich—"Retrospection", "Senora B.", "Mission Garden".

Frank C. Elliot—"Colonnade".

Clair N. Fuller—"A Bit of California".

Milton H. Inman—"Upward Trend", "Dapprich".

Arthur F. Kales—"Armida Vendrell".

James S. Lawshe—"Jean", "Tondalayo".

Dr. Wm. F. Mack—"Italian Fishing Boat".

Dr. Frank E. McCann—"Montana Vista".

Harry John Painter—"Mission Bells", "Under the Pier".

C. L. Southard—"The Sentinal".

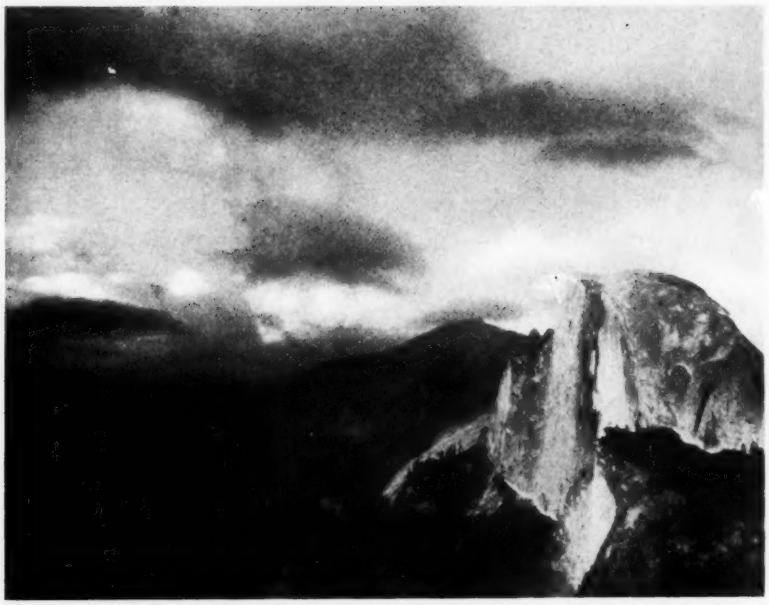
Edward R. Tabor—"Through the Arch".

Milo K. Temple—"In Burma".

Clark W. Thomas—"Rounding Up the Strays", "A Cloistered Patio", "Outward Bound".

R. L. Van Oosting—"Awaiting Orders",

ARMIDA VENDRELL
ARTHUR F. KALES
LOS ANGELES CAMERA CLUB



SIERRAN EVENING — R. L. VAN OOSTING
LOS ANGELES CAMERA CLUB

"Sierran Evening", "The Spirit of Neptune".
Lucille Whitman—"The Windmill".
Claud C. Williams—"Pattern".

When Mr. Clair N. Fuller, the genial and accomodating president of the Los Angeles Camera club, introduced me to the winning set of prints as they hung last summer in the club headquarters in the Stimson Building, I spent one of the happiest hours of my life, not in examining the set critically, but in forgetfulness of everything except the good qualities of the exhibition. My critical judgment I reserved for another day when my head and not my heart could be master of the occasion.

Now, in the prints I am passing on to readers of PHOTO-ERA MAGAZINE no attempt is made to choose the cream of the exhibition—if it were possible for one individual to do so—but rather to submit a list that is fairly representative of the quality and subject-matter found in the 1928–1929 exhibition. Let us now turn to this representative group.

Although I have lived among the mountains all my life, I have never been privileged a sight similar to "Sierran Evening" as interpreted by R. L. Van Oosting. Certainly, if we judge by the print, the pictorialist must have beheld a remarkable sight when he made the exposure. For to me the picture alone is sufficient to inspire a kind of reverential awe for the majestic contrast often found in natural forces. The immense boulder with its castle-like tower defies the ominous valley, as though it were daring the approaching storm to do its worst; for come what may, the impregnable bulwark will remain unchanged. To the light-toned pillar of stone the eye is naturally led, so this region may, indeed, be called the central point of interest. Next, we are impressed by the lowering clouds with their sunlit silver-linings. Dark hills in the background merge into these water-laden shapes, while below lines of hillside gullies lose themselves in the ebony stillness. Like the forces of life, this admirable landscape has two contrasting sides—the adamantly bold mountain at the right and the mysterious depths of oblivion at the left.

"Colonnade" by Frank C. Elliot is an interesting bit of architectural design whether it is inspired or not. Those who enjoy this type of architectural photograph may be at a loss to point out the delight-giving items, indeed, this may be impossible with any type of picture, in the last analysis; for it is totality that determines after all whether we enjoy a picture. But as "Colonnade" lies before me, it is the fascinating

THE SENTINEL C. L. SOUTHARD

LOS ANGELES CAMERA CLUB

interplay of light and shade on the right wall that is most interesting. This fact finally overcame my first impression that the picture was slightly overbalanced by the heavy columns on the left. Mr. Elliot in making this picture was presented a nice problem in technique, that almost approached a dilemma in the matter of exposure. If the negative were given sufficient exposure to record full detail in both shadows and highlights, the moving figures along the esplanade would be hopelessly blurred; on the other hand, if the exposure were sufficiently brief to "freeze" the motion of the most active pedestrian—then the shadows and highlights would be totally without character. Mr. Elliot wisely solved the problem by effecting a compromise. The line of massive pillars at the left combine repetition with variety, qualities that are as frequently found in good pictures as in music.

As the print of Mr. C. L. Southard's "The Sentinel" lies before me, it appears that this is a picture that a halftone engraving cannot give full justice to. I refer particularly to the mist-enshrined mountains in the background which will undoubtedly lose out entirely in the accompanying reproduction. Without this distant mountain the whole picture might appear slightly out of joint from the standpoint of perspective. Lest my worst fears be realised, I hasten to explain that the print shows four definite planes. What is visible of the tree is interesting, but we cannot completely escape the feeling that the picture is a little heavy on the left side.

"Pattern", by Claud E. Williams, is quite impressive with the silhouetted piles, the mysterious shadows and reflections on the near-by sand, and the light, airy ocean in the background. Nor must we overlook the child in the left foreground who seems to be nonchalantly unaware that a picture is being made. Although the photograph may have strict limitations from the pictorial point of view, it does impress us with

COLONNADE FRANK C. ELLIOT
LOS ANGELES CAMERA CLUB

an oceanic atmosphere. We can, from the picture, easily hear in imagination the slap and swish of the breakers as they roll beneath the docks, only to drain out to sea again in a rhythmic, haunting, threnody.

In the original bromoil, "Armida Vendrell" by Arthur F. Kales, is one of the most delicate and exquisite bits I have ever seen. The original is finished in a soft pink tone that serves to accentuate all the charm of both subject and rendering. A glossy print finished in black and white can obviously give a very inadequate idea of the true merit of this picture. The accompanying illustration does reveal the fact, though, that Dr. Kales was highly favored among photographers by having for a subject such a charming personality as "Armida Vendrell", who is shown in a pose wholly sincere and unaffected.

In my recent visit with members of the Los Angeles Camera Club, I was impressed, not only with the quality of work done by the group as an organisation of photo-pictorialists, but with the success of the club as a social unit. The club headquarters are situated in the heart of downtown Los Angeles, making it easily accessible to the business and professional men and women who compose the bulk of the membership. The suite of rooms occupied by the club is open practically every day; and the library and darkroom are frequently used inasmuch as some of the members do practically all their photo-finishing in the club darkrooms. The place is an admirable center for the kind of evening-talk that folks of congenial, artistic tastes enjoy. Weekly meetings are held; these are outlined for a month ahead so that the members know exactly what to expect each Thursday, which is the time set for meeting. One meeting each month is designated as social evening, when official announcements are banned and refreshments are served.

PATTERN — CLAUDE C. WILLIAMS
LOS ANGELES CAMERA CLUB

The Club publishes an official monthly organ known as *The Developer*, which is practically supported by advertisers who find the 16-page monthly well read among the club membership. *The Developer* is chock full of spicy notes, short articles on photography, and news-items, such as the monthly program, so that no member of the Los Angeles Camera Club can afford to overlook a single page of the little publication. To show the enterprising nature of the organisation along educational lines, I quote, in conclusion, a typical article which appeared in a late issue of *The Developer*.

To Educate High School Students

"It is sometimes said that if a thing is talked about enough it will come to pass. So be it. For months we have talked about exhibiting some of our photographic work at the high schools and colleges to interest students in the camera and darkroom as a means of artistic expression.

"Last spring we displayed a set of prints at the Franklin High School where it attracted a great deal of favorable comment. As a direct result we have been asked to loan such a set to some of the other schools.

"To meet this demand President Fuller has requested members to bring in two to four prints apiece for such a set. The prints should be brought in at the earliest convenience, and the wrapping plainly marked 'For Educational Set'. This exhibit when compiled will be sent to all of the schools and colleges in and around Los Angeles who will be able to use it to good advantage.

"This should prove a great stimulant to pictorial photography, indirectly, if not immediately. At the present time the schools are devoting a great deal of time and effort to encourage students to express their artistic feeling through the mediums of etching and painting. There are many who for various reasons are unable to follow along these lines, although they yearn for some medium of expression. We feel certain that the circulation of this collection of photographs is going to arouse much interest among teachers as well as students and that many as a result will take up this hobby."

[We sometimes wonder whether or not our readers grasp the fact that pictorial photography is bringing men and women in all parts of the world together, in a way which is not defined by an International Court but rather by the heart. We of the East welcome photographic news of the West; and, in so doing, we gain in knowledge and in valued friends. We rejoice in their success.—Editor.]

Outdoor Photography in Winter

RICHARD K. WOOD

APPARENTLY, most amateur photographers are under the impression that only summer-time is kodaking-time. The only explanation that can be given for this general fallacy is the tendency to stay indoors in the winter. Just as there are many delightful and healthful winter-sports to take the place of summer-sports, so there are equally as many desirable camera-subjects in the winter as in the summer.

If you have shelved the camera for the winter, take it down, clean the lens, inside and out, with a soft linen cloth. If the lens is coated with a film difficult to remove, better use a cleaning fluid procurable from the photo-supply houses, and opticians. In cleaning a lens, unscrew the front element, clean, replace, then take the back off the camera, unscrew the back element, and clean. Do not oil the shutter. One of the first requisites for brilliant snow-pictures is a clean lens, hence this advice.

Most winter-time camera-subjects will consist of snow, or snowy backgrounds; and it is very important that the proper exposure is given to ensure proper graduation and detail. Expert photographers can estimate exposure closely enough, when using a reflecting camera; but the amateur will do well to invest in a reliable exposure-meter which, more or less automatically, calculates the exposure for him. There are so many types of exposure-meters on the market that I am tempted to mention only two that I have used with entire satisfaction. The Harvey is an ingenious celluloid pocket with transparent windows, and a slide of tables, which will cover practically every condition confronting the amateur photographer. The cost of two dollars will soon be saved in eliminating incorrectly exposed films.

A more elaborate exposure-meter, working on a principle whereby the light-strength is actually measured by the eye, and then the proper exposure derived by a semi-automatic process, is known as the Drem Justophot and sells for $10.50. The limited space of this article does not permit giving a technical description of the Justophot meter; but suffice to say it is the choice of many professional and advanced amateur photographers.

Snapshots may be made satisfactorily in the winter-time, the same as in summer, especially on sunny days. However, it is advisable to invest in a compact metal tripod to ensure good pictures on cloudy days, and in the woods, or other places where the light is restricted. I mention metal in particular because most wooden tripods are unnecessarily bulky and are inclined to swell and prevent closing after being wet a few times. Remember that snapshots are limited to sunny days, and that the smallest "stop"—regulating the diaphragm aperture—cannot be used without having the camera on a firm support; therefore, broaden your photographic possibilities by acquiring a tripod. Then by consulting the exposure-meter, you can make good pictures, inside rooms, in the woods, in camps, and on dull days. Your landscapes will be better because the time-exposure will permit using a ray-filter and small stop.

The same camera that will make good pictures in the summer-time will be equally serviceable in winter. It may be a simple box camera; but its usefulness will be limited, generally, to snapshots on sunny days. A very desirable amateur's camera is a 2¼ x 3¼ rollfilm model, equipped with anastigmat lens, F/6.3 or F/4.5, and with shutter speeds of 1, ½, 1/5, 1/10, 1/25, 1/50, 1/100, 1/200 and 1/300 of a second. Without giving technical explanation, suffice it to say that 1/300 of a second exposure with a camera of this size is equal in "stopping" motion to 1/900 second with a 5 x 7 camera. Furthermore, the maximum size lens, F/4.5, can be utilised "wide open" on subjects twenty-five feet or farther away, with assurance they will be sharp in the resultant picture; whereas the depth of focus given by an F/4.5 lens, wide open, on a postcard or larger size camera is extremely shallow. Let me explain in this manner: Suppose for example that the smaller camera is focused on an object twenty-five feet away and objects between fifteen and thirty-five feet from the camera appear sharp. This area in sharp focus is called "depth of focus". Now with a postcard camera using the lens at stop F/4.5, the depth of focus may be cut down to objects beyond twenty feet from the camera and closer than thirty feet, and with a larger camera the depth of focus will be correspondingly less. Of course, the depth of focus varies in proportion as the lenses are stopped down to smaller apertures.

In spite of the optical advantages of the small camera, the lower initial cost, lower up-keep for films, and the convenience of light weight and compactness, many amateurs will insist on a camera making pictures large enough for the

THIRSTY — HENRY SILL

HONORABLE MENTION—OUTDOOR-GENRES

album without the aid of the enlarging-process. I prefer to enlarge my best negatives and discard the worst; but if you wish a larger picture than 2¼ x 3¼, let me suggest the 3¼ x 4¼ size as a compromise between the pocket camera and the professional equipment; and the postcard and 4 x 5 cameras as maximum sizes for the amateur's use. An F/6.3 lens is the best size for the larger cameras. The photographic occasions calling for the use of maximum apertures are very rare; even then results are always questionable.

Now that a decision is made concerning the proper camera, be sure to include a sole-leather carrying case, if a large camera; or a belt-holster case for the small camera, and let's hie forth into the winter woods for pictorial subjects.

There are city subjects, as well, and I might suggest street, park and monument scenes, covered with a mantle of snow. Many interesting pictures have been made after night of well-lighted buildings or park-scenes, giving fifteen to thirty minutes exposure. Well-lighted city streets may take as short an exposure as two to three minutes.

Where snow predominates in a picture, the sun should be shining from a low, side position to give best artistic results. It is almost impossible to get a good snow picture on a dull day. Results are just about as poor with an overhead sun. Early morning and late afternoon hours are the best for landscape photography, especially on the snow. A side lighting shows up tracks and paths in the snow, besides casting shadows that often create an artistic pattern on the snow.

In photographing close-up objects and making portraits, one of the best rules you can follow is to silhouette your subject with the background. Since most subjects are dark, the snowy background serves admirably to outline the subject. Just bear in mind that a camera held at the waist does not photograph from the slant observed standing upright. Be sure to get your eyes down to camera level, then you may find the subject's head merging into a dark evergreen background, and can correct the composition.

There is very little color in snow-photography, even though snow is not pure white, as it appears to the eye. In camera practice, it is advisable to stick to ordinary films and bear in mind that your best pictures will be composed of masses of light and shade. A little study of an elementary book on composition will aid wonderfully in training your mind to detect pictorial possibilities in an outdoor subject, and to make the most of available materials.

In connection with snow-photography, the precaution must be taken to shade the lens from the strong glare, especially when the camera

is pointed toward the light. Adjustable metal flanges can be bought to fit the larger lenses. A funnel-shaped shade may be made with heavy brown paper; but it is awkward to carry. The hat is generally used to shade the lens from direct sunlight. However, this improvised method is not ample to exclude the reflected rays from snow, and more brilliant negatives will result by using a regular lens-shade.

Concerning winter-landscapes, Phil M. Riley, a well-known camera artist, gives some pertinent advice: "A never-ending variety of picture-material presents itself constantly in winter; especially in the country, where beautiful motives are to be seen in almost every direction. Thus it is that the matter of selection is one worthy of careful thought. Harmony of composition as well as simplicity of arrangement should be constantly striven for, the common fault being to include too much within the picture-space. A snow foreground cut athwart by the shadows of trees; snow-covered walls and fence-corners, paths through the leafless woods or sighing fir trees; city streets and country roads; the sloping banks of streams, open or ice-bound; snow-laden bushes and subjects of similar nature lend themselves readily to the camera."

Perhaps the best time to obtain strictly snowscape pictures is after the sun comes out, following a fresh snowstorm. Then the bushes, especially evergreens, are heavily laden, small brooks are almost buried, large boulders are beautifully rounded over, and a low side lighting will enhance, from a pictorial standpoint, many knolls, paths, and ravines. Do not spoil a good composition by including too much. Often I have obtained two or three landscapes from one position, by merely swinging the camera in different directions. Again by enlarging I have taken two compositions from one negative.

Just as in the story or "movie" scenario, the action moves around one dominant character, so in outdoor photography there should be a central theme, or subject to which all accessories are subordinate. The most obvious way to accomplish this result is to focus sharply on a foreground subject, and make the background fuzzy or take on the appearance of distance by using a fairly large "stop." A better method for landscapes is to select a simple subject and eliminate as many distracting things as possible. Suppose that you are given a man on snowshoes on a trail leading toward a distant mountain. Unless you exercise care in composing your material, the resultant photograph will be a conundrum as to whether it is a picture of the man, the trail, or the distant mountain. If you would make pictures instead of merely photographs, emphasise one dominant subject.

Some curious effects are given by hoar-frost formations, and these may be photographed to best advantage in the early morning hours, usually employing a side lighting. These subjects will invariably require a small stop, F/22 at one-half to one second, unless the light is very bright; and a tripod is a necessity. In making any landscape requiring an exposure longer than 1/10 second, wind-movements must be watched closely. Of course, a strong wind will make snow-laden bushes and hoar-frost pictures impossible; but a gentle breeze is tolerable, if the photographer watches his chance and makes the exposure during a lull.

Outdoor sports, such as tobogganing, skiing, ice-boating and skating, offer possibilities to every photographer. These sports are best handled with the expensive reflecting-camera, whereby the image is seen on the mirror, right side up, right up to the instant of exposure. Yet, if you do not have such a camera, you need not be discouraged for some excellent action-pictures have been made with ordinary Kodaks and hand cameras, when the subjects were well illuminated and contrasted against a light background. Ski-jumpers should be silhouetted against the sky by holding the camera low to

Subject	Shutter Speed	Stop
Snow foreground; distant mountains	1/25 sec.	22
Open snowscape	1/25 sec.	16
Landscape with near subjects, no snow	1/25 sec. 1/5 sec.	11 22
Subjects in deep shade or in woods	1/5 to 1 sec.	11
Tobogganing; ski jumping	1/800 sec.	6.8
Skating, coasting	1/600 sec.	6.8
Snowshoeing, skiing	1/800 sec.	7.7
Walking motion	1/50 sec.	8 if shaded 11 in sun

the ground. Silhouette other subjects against a snow background.

The table of exposures on page 300 is merely given as a brief guide. I have already advised the use of an exposure-meter. We will assume that the camera lens—of about 6-inch focus, such as is usually put on postcard cameras—is used at stop F/6.8, and the subject is twenty-five feet distant, approaching at a 45-degree angle. If a smaller camera is used—which means a shorter focus lens—or the subject is approaching head on, the exposure can be just one-half that given, or one-fourth if both conditions obtain. Also the calculations are based on the use of ordinary rollfilm. Super-speed film is twice as fast as rollfilm. Further, these exposures are given only for bright sunny days.

Just a word of advice for the amateur who develops his own. Most winter snapshots are likely to be under-timed, especially when a speed higher than 1/100 second is used, and for these negatives I recommend the following tank developer: hot water, 25 ounces; dry sodium carbonate, 1 oz.; glycin, ¼ oz.; dry sodium sulphate, ¼ oz. Use two ounces of this stock solution to thirty ounces of water at 60 degrees temperature and at end of thirty minutes take out the fully-developed negatives. The rest can be left in the developer even for hours without injury. Wash the negatives before putting into the acid fixing-bath. Leave in the bath for three minutes before turning on white light.

Light and Shade

LENA LEE SPEER

"MOLLY", said Jim Rider to his wife, as he rose from the breakfast-table Saturday morning, "tomorrow is my last chance to get a real picture—the competition closes next Friday. I'd like to get something worth while in the early morning light and stay out for the late afternoon light." Molly knew the softening value of early and late lighting, as she was Jim's constant companion on photographic expeditions; so she promptly replied, "I'll order food for picnic lunches and we can spend the entire day in the country."

The next day they rode for miles, and tramped as many—or so it seemed to Molly—looking for scenes that had photographic possibilities. Many were alluring until focused upon; then balance was lacking or the center of interest missing. Hope remained, however, constantly coaxing them around the next turn in the road. Then Jim found his masterpiece. His face lighted with pleasure and his movements were eager as he set up his camera. After the click, he turned to say: "This is going to be good. The light is just right, and I do think I've got atmosphere in it, too."

"Oh, I hope so, Jim. This is a beautiful little lake. That should make a good one, too." Molly pointed to an old house near-by, for she never overlooked one. They had a romantic appeal for her, an appeal which she supposed to be universal.

"A fair day's work—eight exposures, and one of them is going to be a real one. Let's go home."

"Wouldn't it be wonderful if you did get first prize! I just know your pictures are as good as anyone's in the club—better, it seems to me. Of course, you will say that Dr. Radford has good technique, but I say that he has poor composition; then, Mr. Dennis understands composition, but he is careless with his work. You have a feeling for composition, and your technique has improved much the last two years. My! I can't wait until next Sunday—you will know who the prize-winners are by then, won't you?"

"There will be others beside our own club members competing. This is a national exhibition, and it will be an honor to have a picture accepted for hanging; so do not expect too much in prizes."

Monday afternoon, Jim came home early to develop the negatives made the day before. He came in smiling.

"Funny thing, Molly, I just met Anton Koninski walking down the street. I told him that we took a two-hundred-mile drive yesterday, running down pictures, and that I thought I had one that will be really good. Felt rather sorry for him. He says that he has to get his pictures right here—after work hours, too, as he has neither time to get out, nor automobile to go in. Works on Sunday besides. While we stood talking, he asked if I objected to his taking a shot at the side of the garage. It did look pretty. Queer, I never noticed before the shadows made by the tree on the stucco-wall in the late sunlight. That's Anton, though—he's always seeing things like that."

"But I don't think that will make much of a

picture. There is nothing in our yard worth the price of a film."

The following Sunday morning an insistent ringing of the doorbell awakened Molly.

"Oh Jim, wake up! hurry! I know it's something about the pictures. Maybe you got first prize. Hurry!"

Jim soon returned, carrying the morning paper under his arm and a yellow slip in his hand.

"Got something, anyway—an honorable mention. Considering the breadth of the competition, that's not so bad", said Jim smiling. Then he opened the rotogravure of the Sunday paper. The smile vanished as he stared at the page.

"What is it Jim? Let me see."

At last he turned the page to Molly. There was a full-page reproduction of the prize-winning picture, entitled simply, "Light and Shade", by Anton Koninski.

An "Ah-h!" of amazement escaped Molly. She was seeing beauty where she was sure none had existed—a familiar yet unfamiliar scene. There was the beauty one associates with foreign buildings—a long, low wall with wide overhanging tile-roof, small windows, and the delicate tracery of leaves upon the wall—the wall of their own garage—a picture with Old-World atmosphere, vibrant with light and shade.

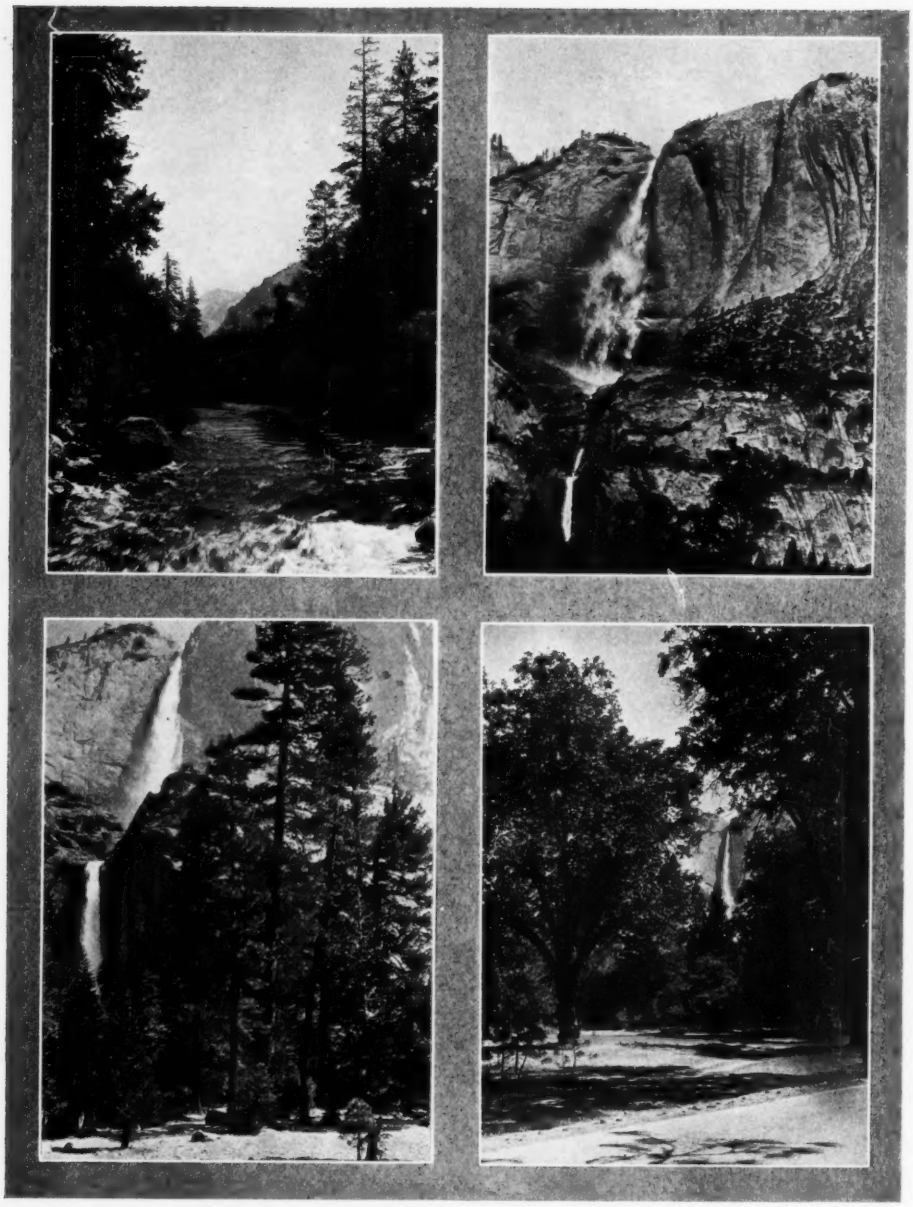
Photographing Picturesque Yosemite

CHARLES C. BLANCHARD

PROBABLY in no other location in the United States of the same size can as many beautiful subjects be photographed as in the Yosemite National Park. It has frequently been stated by writers in PHOTO-ERA MAGAZINE that opportunity for good photographs exists everywhere, and readers of our splendid publication have seen many examples of pleasing pictures from the most commonplace subjects. But here in Yosemite the most interesting and beautiful subjects greet the photographer at every turn, with opportunities for artistic lighting-effects at many different hours of the day. Nevertheless, one who wishes to obtain really satisfactory photographs in Yosemite should make careful plans before starting on his trip. It should first be remembered that the great rocks tower thousands of feet above the floor of the Valley, on practically every side. These affect the light-value, as one without previous experience would not suspect. These great rocks are in most cases covered with foliage which absorbs the light, and it will be found that at least double the time must be given in the Valley that would be given outside. This was proved to the writer in June, when one of the most prominent photo-finishers in the Park stated that between eighty and ninety per cent. of the film exposed in the Valley and submitted to him for development was badly underexposed, and most of it worthless. Then it should be remembered that the great height of the Falls—Yosemite being over 4,000 feet—requires a short-focus lens and a swing-back on the camera, if one is to get satisfactory results. The picture No. 1, made from the roadway, with a 5 x 7 camera and a 7½-inch lens, required the full use of the swing-back. The first trip by the writer to this beauty-spot, six years ago, resulted in absolute failure from a photographic standpoint. Two years ago, about fifty per cent. of his pictures were fair. This year, using Panchromatic film, and giving about two-thirds more exposure than outside, every film that he exposed was properly timed.

When one has experienced for himself the disappointment that comes on his return home from his vacation when one finds that his much cherished films or plates are failures, he can symphathise with the great number of people who are "shooting" indiscriminately in dark shadows, or directly toward the sun at towering mountains or great waterfalls which their cameras will not half cover. The writer talked recently with a splendid painter friend who makes a great deal of use of the camera in his work. This friend admitted that, in a recent trip to the Yosemite, most of his photographs were failures. The Editor of PHOTO-ERA MAGAZINE, in the June number of the magazine, gave us much. advice about the waste in picture-making. Careful study of our subjects *before* making our exposures and the use of a good exposure-meter would eliminate a large part of this waste. Another source of waste is in keeping our chemicals, papers, and films until they have deteriorated, so that good results are impossible. The use of bromide will not save them; but real interest in our photographic equipment, getting out into the open with it at every opportunity, will bring us health, clear vision, and the joy of achievement.

YOSEMITE FALLS
YOSEMITE NATIONAL PARK
CHARLES C. BLANCHARD

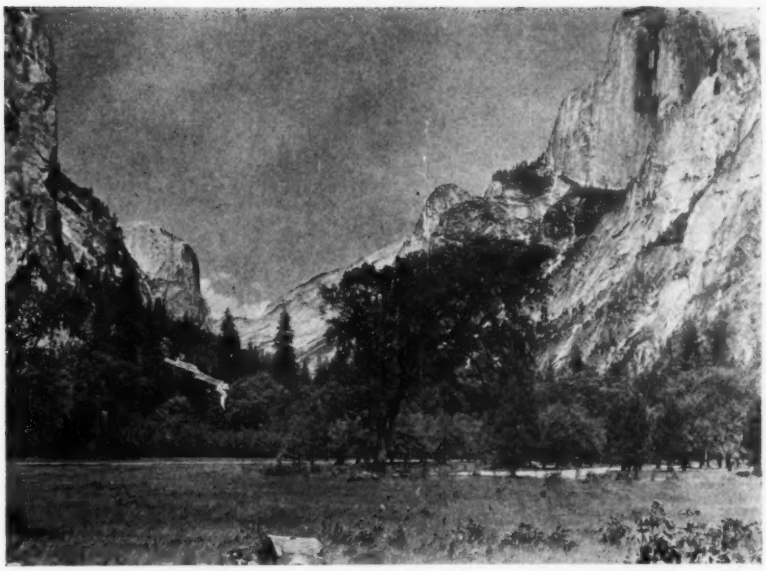


Merced River from El Capitan Bridge
Foot of Yosemite Falls

Yosemite Falls from "Old Village"
Yosemite Falls, through the Trees

VIEWS OF YOSEMITE

CHARLES C. BLANCHARD



HALF-DOME AND WASHINGTON COLUMN — CHARLES C. BLANCHARD
YOSEMITE NATIONAL PARK

Although Yosemite National Park is much greater both in area and beauty than is generally known—the park itself having an area of 1,125 square miles—this should not frighten the average tourist or photographer, for Yosemite Valley occupies only eight square miles. This eight miles, however, contains enough picture-material to keep one busy for weeks, or even months; and the trails leading to Vernal Falls and Nevada Falls, the former 317 feet in height and the latter 594 feet, give one an easy and beautiful hike of about two miles along the Merced River, which is replete with picture-opportunities. Mirror Lake, only a short walk from Curry's Camp, is a great center of interest for photographers; but it should be visited in the early morning to get the shadow-effects. Here will be found, every morning, several professional photographers with their cameras set up on tripods to accommodate those who desire pictures of the lake containing their own photographs, and they do a good business. They are surprisingly courteous, and are always willing to give amateur photographers advice as to position and time of exposures.

Perhaps one of the loveliest views in the Valley is the view entitled "The Gateway". At the right is Bridal Veil Falls, and in the distance is "Half-Dome" and "Three Brothers". In the foreground is the Merced River; and, if one is fortunate enough to get a few clouds, one has, indeed, a memorial of Yosemite which will be a joy forever. "Cathedral Rocks", with its lovely shadows and reflections in Merced River, is another prize.

As will be seen from the pictures, Yosemite Falls and Bridal Veil Falls may be photographed with pleasing results from various points in the Valley at different times of the day and with different settings. From the bridge at "Happy Isles" may be found two views that will please at certain hours of the day. One is lovely "Half-Dome", with the river as a foreground and a beautiful framework of pines. "Happy Isles" is an early morning or a late afternoon view of rushing waters on both sides of the Isle and is pleasing. From "Inspiration Point" is a lovely view of the whole Valley, but one which must be made with a telephoto lens. Incidentally, in the lobby of the Fresno Hotel is a painting of this view by a New York artist—a painting that is a joy, and which is valued at $25,000.

Glacier Point, 3,234 feet above the floor of the Valley, has a projecting rock that is much photographed. It is said that a pebble dropped from this rock would fall 2,000 feet before striking anything. From this point are pushed the live

coals of fire that make such wonderful entertainment at Camp Curry every evening. There is an open-air theater at Camp Curry which gives pleasing and high-grade entertainment every night at eight o'clock, free of charge. Some of the finest violin-playing that the writer has ever heard was given from this stage, and historical sketches and talks by noted naturalists are the order of the day.

The naturalists employed by the United States Government take visitors on trips, either on foot or on horseback, through the Valley every day. This gives a wonderful opportunity, free of charge, to learn of the flowers, trees, birds, and animals. For those who are more strenuous, trips with guides covering periods as long as a week may be arranged.

Deer and elk are very tame and give opportunity to exercise one's ingenuity in catching them in natural poses with the camera. The bears run at liberty, and are really and truly *wild* bears. This has been learned through sad experience by some who have fed them from the hand and made too free with them. The writer learned this season of a party who came to the Valley and camped in one of the Government camp-grounds. They had a nearly new Packard Sedan, and in it were camp-supplies, including bacon. During the night a bear came and broke the glass, climbed into the car, ate the bacon, damaged the upholstering, and disappeared.

After the entertainment at Camp Curry every evening, busses take parties down the Merced River to see the bears fed. A feeding-place has been prepared and lighted by electric lights, and garbage and other foods are dispensed from a truck on the opposite side of the river. Evidently the driver of the truck has had experience with them, for they fear him and will not come out of the woods until he has left the scene; then they come out, both big and little, one large black bear having a pair of twin cubs. It is an interesting sight, but impossible to photograph.

Yosemite is now open throughout the year, the Government keeping the automobile road free of snow, and winter-sports are growing more and more popular. Several reels of motion-picture films shown on the screen at Camp Curry this season show the visitors in action in many unusual and entertaining stunts. All seasons of the year in Yosemite are picture-seasons; but the best time for the Falls is probably in May, at which time great volumes of water are flowing over, which sometimes make the earth tremble for a distance of half a mile. It is a land of sunshine, and it seldom rains between May and October. The Valley may be reached by train or automobile from Merced, which is on the main highway from San Diego to San Francisco. The distance by automobile is about ninety miles from Merced over a splendid macadam road cut through rocks and mountains, and built by the State of California and the United States Government. About forty miles of this road follows the Merced River through El Portal to the Valley, and pictures are calling "Camera!" all the way in.

Artistic Mounting and Framing of Photographs

D. BATTERBURY

NOTHING enhances so much the beauty and interest of a photograph, whether it be an enlarged snapshot or a studio study, as its suitable and artistic mounting and framing. But although this fact is universally recognised among picture-lovers and photographers generally, it would seem that comparatively little knowledge of a technical sort exists as to such suitable handling of photographs and pictorial subjects.

Now, although it is practically impossible to lay down any definite rule as regards width and shade of mat (mount) or type, tone, and width of frame for any particular sort and size of photograph, a few broad observations with regard to the fundamental rules for mounting and framing pictorial work generally may help the photographer to solve any particular framing problem with which he has to deal, and may help further in the matter of how logically to categorise a subject into definite type so that it may receive definite treatment.

The main characteristics in a photograph—in common with other sorts of pictorial work—which have strong influence in the matter of mounting and framing are, broadly speaking (1) the nature or type of subject, (2) the mass value of the picture, and (3) its outstanding color or tint. If an intelligent study of these three main factors is invariably directed on each and every subject to be treated, it is safe to say that artistic and pleasing effects will always result.

Let us come down to details and consider the

requirements of different classes of pictures and their relation to these points.

In the first place, there is the question of whether a picture—and this term is used in a comprehensive sense, including all types of photographs—requires a mat at all. Some subjects look very well framed close-up; others require a mat to set them off adequately. Why is it? Without wishing to dogmatise at all, it would generally seem that those subjects—no matter whether they be group, portrait, or pure scenic—which do not require a mat are those which are not closely massed in treatment, and where there is obvious light-and-dark contrast—such, for instance, as a lake study with a good expanse of light-toned sky and near water relieved contrastingly with trees—say in the middle distance—these former features of sky and water acting in themselves as natural mats. Such would also be the case with a portrait study where, preferably, the background is light in contrast with the face or figure. On the other hand, those subjects which invariably and emphatically do require a mat are those which are closely massed and generally flat in tone and key; as, for example, a picture of a dense wood where no sky or other light-tones are visible, or in a portrait, where the tone-key is more or less the same throughout, resulting in little contrast. If the photographer can thoroughly grasp these points relative to mass and apply the foregoing observations to any photograph to be framed, he should be able to solve without difficulty the problem of the close-up or open type of frame, as the matter depends upon mass.

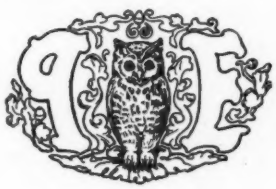
On the subject of the correct shade of mat—if such is required—this should, generally speaking, be tonally harmonious with the outstanding tint characteristics of the subject. Now, all tints and colors may be broadly divided into warm shades and cool shades—the former consisting of the reds, pinks, warm yellows, certain greens, and browns; the latter of the blues, grays, certain greens, and cool yellows. As, however, in photography, the main finish is either in sepia (warm) or gray (cool), the subject is reduced to having the mat tint in a corresponding class of shade with the photograph finish. In other words, sepia finish may be suitably and harmoniously treated in a warm mat such as a cream, light buff, or suitably warm natural shade; while the gray finish will invariably call for a cool gray or a harmoniously cool halftone. Similarly, a warm white—if such a term be understood—will suit the former finish, and a cool white the latter. Experiment, however, in this and every other matter pertaining to mounting and framing, should always be employed.

The width of mat is much a matter of personal and individual taste; but here again the effect of mass has strong bearing. Lightly massed subjects will look quite well in shallow mats, while those that are flatter and denser in treatment demand greater marginal relief.

In considering the question of suitable frame moulding, it will generally be found, with regard to photo-tint finish, that those in sepia tint will look effective in any harmonious brown and sometimes in a dull gilt; while most pictures finished in gray are best treated in black, which, technically speaking, is an intensified gray.

The width or weight of frame will very much depend upon the nature and size of subject to be treated; but light, delicate frames nearly always look artistic with almost all types of photographs—with the exception, perhaps, of certain costume portraits (studio), which have a strong decorative note requiring a certain richness in frame treatment. But these cases are comparatively rare; and, in view of the fact generally that the medium of the camera is essentially delicate and fine in detail, similar characteristics in frame are logically called for. If the writer may express an opinion—based upon ten years' experience in handling all types of photographs—it is that invariably, with almost all the gray finished photographs, the simplest narrow black molding (French or dull finish) is by far the most artistic; while, with sepia-toned subjects, nothing looks better than a narrow mahogany or brown Circassian walnut frame.

However, if the photographer, in seeking to enhance a subject by its proper framing treatment, studies seriously the fundamental points connected with tint, mass, and type, he will lay hold of the key which will reveal the most satisfactory treatment for any subject, irrespective of its nature or kind.



The Photographic Adventures of Bert and Ray

VI—The Partnership is Named

NEIL WAYNE NORTHEY

(When Bert Easton and Ray Wentworth formed a partnership for the purpose of adventuring together into the delights of picture-making, they were quite undecided on a name for their society or club or union, which in reality was none of these. And so they decided to offer a prize of $3, as announced in the July number of PHOTO-ERA MAGAZINE, to the reader of that magazine who suggested the name that suited them best. The time limit expired August 31, and, with all of the names in hand, suppose we "listen in" on the work of deciding the winning name.)

WHEN Bert entered the workroom that the boys had made in the basement of Ray's home, he found Ray seated at a table with a pile of letters and cards before him from which he was copying names.

"I'm making two lists of the names", he explained to Bert, "so that each of us can have a list to go over and decide, without the other knowing, which name suits him best. You pick a first and a second choice, and I'll do the same. If a certain name gets two mentions, either two firsts or two seconds or a first and a second, it will be the winner, because that will prove we both like it. In other words, if both of us give a certain name second place and both of our first are different, it would be better to give the former first place rather than for each of us to try to convince the other that his choice for first was the better."

"I think that is fair enough", agreed Bert; "and if no name gets two mentions, we'll call in a third person."

"Yes. And in selecting the name, we want to choose the one that comes nearest to expressing the aim of our partnership as well as to identifying it. We could hardly be called a club or a society or an association, because there are but two of us."

For a while there was silence in the room, while each of the judges went down his list of names, checking off those which did not quite suit for one reason or another. At last Ray wrote two names on a piece of paper, laid it face down on the table, and looked over at Bert.

"Quite a problem, eh?" he said.

"Yeh", said Bert. "At least I can't quite decide on a second choice."

"What do you have for first?" asked Ray.

"Raybert Pictorialists."

Ray grinned as he turned over the paper containing the names he had selected. "Then you don't need to go any farther", he said, "because two firsts should give it the prize."

"Let's see who the winner is", said Bert.

"Here he is", said Ray, as he picked a letter from the bundle on the table. "Want to hear what he has to say?"

"Yeh, go ahead." And so Ray read:

To BERT and RAY,
Pictorial Futurists,
c/o PHOTO-ERA, Wolfeboro, N.H.

Dear Fellows:

I am much interested in your venture, as outlined in PHOTO-ERA, and suggest that you call yourselves *Raybert Pictorialists.*

Of course, you are not in this class as yet, but with experience and the assumption that your enthusiasm will not wane, you will reach the heights sooner or later. If you will but follow the directions of PHOTO-ERA, your progress will be rapid and sure.

This advice is from one who has been a reader of that most excellent magazine ever since it started publication—some record!—yes?

With best wishes, I am

Sincerely yours,

H. J. SUTTON.

"That's fine", said Bert. "Let's hear from the others."

"Here's one headed 'Paris, France'. Suppose we read it next."

"Paris!" exclaimed Bert. "PHOTO-ERA must travel a long way."

"I should say so. Here's what he has to say:

Dear Friends:

As a mutual interest in the fascinating hobby of photography breeds friendship, I familiarly address you as friends of mine.

It was with pleasure and interest that I read in that excellent and instructive photographic magazine, PHOTO-ERA, of the splendid partnership which you have wisely formed.

I am sure that you will always have reason to rejoice that this partnership was formed, and the solid links of friendship and photography that make the bond of your happy agreement will tend to ever bind you more closely together as the years all too rapidly speed by.

SIGNS OF SPRING — H. P. HERRON

HONORABLE MENTION—OUTDOOR-GENRES

What happy, happy memories of past joyful boyhood days flooded my mind as I read of the birth of your partnership!

The account of how your association came to be formed vividly recalled to me the time when I first commenced my own photographic adventures with a box-form magazine camera. I was about fourteen years old when I became the proud possessor of my first camera, and my first knowledge of photography was gleaned from the little pamphlet of instructions that was furnished with the camera.

I also formed a friendship with a schoolboy companion, who had a camera similar to my own.

Together, my friend and I constructed a temporary darkroom in a very small recess, which was situated under a stairway. The darkroom was so small that there was barely room for us to turn in it. Our first developing and fixing of plates was carried on in the light shed by a small, defective oil lamp. By the time our first batch of plates were fixed, we were perspiring and half-suffocated by the atmosphere of the room, but excitedly happy to view our first negatives. We were very proud and satisfied, notwithstanding that the negatives, I now know, were underexposed and insufficiently fixed.

In this way, I was launched into the multiple joys of photography. Since then I have developed many plates and films with a pleasurable thrill, and hope that I may do so for many years yet to come; but I doubt if I shall ever receive more delight in my present comfortable, well-equipped darkroom than the boyish delight experienced in the development of my first twelve exposures.

I sincerely wish your partnership every success. I feel sure that you will derive happiness and joy from your photography and that you will bring pleasure to others.

I now look forward with pleasure to reading in PHOTO-ERA MAGAZINE your further photographic adventures, which will be widely read with interest by your well-wishers, who are all enthusiasts in the fascinating hobby of photography.

As a name for your association, I suggest *Photo-Ray Union*.

Yours sincerely,

J. HESSENBRUCH.

"That was a fine letter", said Bert. "What do you say if we write to him?"

"Let's write to all of them", said Ray. "Only this fellow forgot to give his street address."

"We can send a letter to PHOTO-ERA and ask that it be forwarded if his name is on the subscription list", suggested Bert.

"That's a good idea", said Ray.

After the last letter and card had been read, Ray tipped back in his chair and looked across at his friend.

"Raybert Pictorialists", he mused. "I like that name. Maybe it's a little ahead of us right now, but we can grow to it. We asked for one not too amateurish, and that's it! Now it's up to us to live up to it."

Bert was thoughtful for a moment.

"I'm rather proud of the exposures I made with the Kawee on our last trip to Bolle's Lake", he said. "I believe I can find one good enough to send to the PHOTO-ERA Beginners' Competition, as we planned, if you think one of yours is all right also."

"What do you say we meet next Wednesday night and try making enlargements from some of our best negatives? I have some samples of enlarging paper that I should like to try out."

"We have no enlarger."

"I'll attend to that", said Ray.

"All right. And in the meantime I'll get some things myself", said Bert. "See you later."

(Next month those who enter pictures in the Beginners' Competition had better do their best. Bert and Ray each think he has a prize-winner, but, of course, the judges may not agree with them. Watch for their entries next month and see what you think of them.)

(To be continued)

How to Make Better Pictures

MARY E. ARCHER

THE accompanying snapshots represent the work of amateurs and, if judged by the amateur, would probably be pronounced fairly good; but all of them have defects, the most outstanding of which I am about to point out—for we learn fully as much by our mistakes as by our perfect work.

One fault seems common to all amateur photographers—that of overcrowding—endeavoring to include too much in each picture. Those who possess a natural taste for beauty and balance soon learn to arrange their subject-matter in a manner to obtain attractive effects; but lacking this guiding sense, haphazard work is for the most part produced, until experience finally teaches the folly of it.

This need not be the case, however; for careful study of the manual of instruction which comes with each new camera should enable even the dullest person to produce attractive pictures—pictures which, indeed, have real merit.

Our first picture is an outstanding example of unstudied composition; for it shows three distinct subjects—the ponies, the inn, and the man. With the building, the man, and the telephone-poles removed, and the ponies occupying the principal point of interest near the center, as shown, we would have rather good composition; for the grass forms a simple and unobtrusive foreground and the trees supply an attractive background. Had the operator chosen a somewhat different viewpoint, doubtless such an effect might have been achieved.

We think that the photographer must have possessed a vague idea of all this, for his second picture is somewhat better; but it could be greatly improved by eliminating the house in the background and some of the scenery at the right, retaining only that portion shown within the circle.

The amateur-photographer has done rather well with Number Three; but the picture would be more pleasing if the man appeared farther to the right and the telephone-pole were eliminated. We think, however, that this particular pole was set too near the building to be got rid of, even by the most judicious manipulation of the camera.

The lighting of Number Four is good, and the focus is correct; but here, again, appears an object in the background—the barn—which draws the eye away from the principal object. The background and foreground are pleasing save for this; but the cattle are too closely grouped and a bit too far to the left.

Number Five depicts an attractive meadow-scene; but the sheep are too far away and present too scattered an appearance. The photographer also forgot to place his camera between the meshes of the wire-fence, which would have prevented its showing.

Number Six shows the sheep in better form, and nearer the camera, which, of course, makes a more interesting picture; but it has no commercial value—unless for advertising purposes—because of the Squaw Mountain Inn signboard just above the animals. The photographer should have awaited an opportunity of making

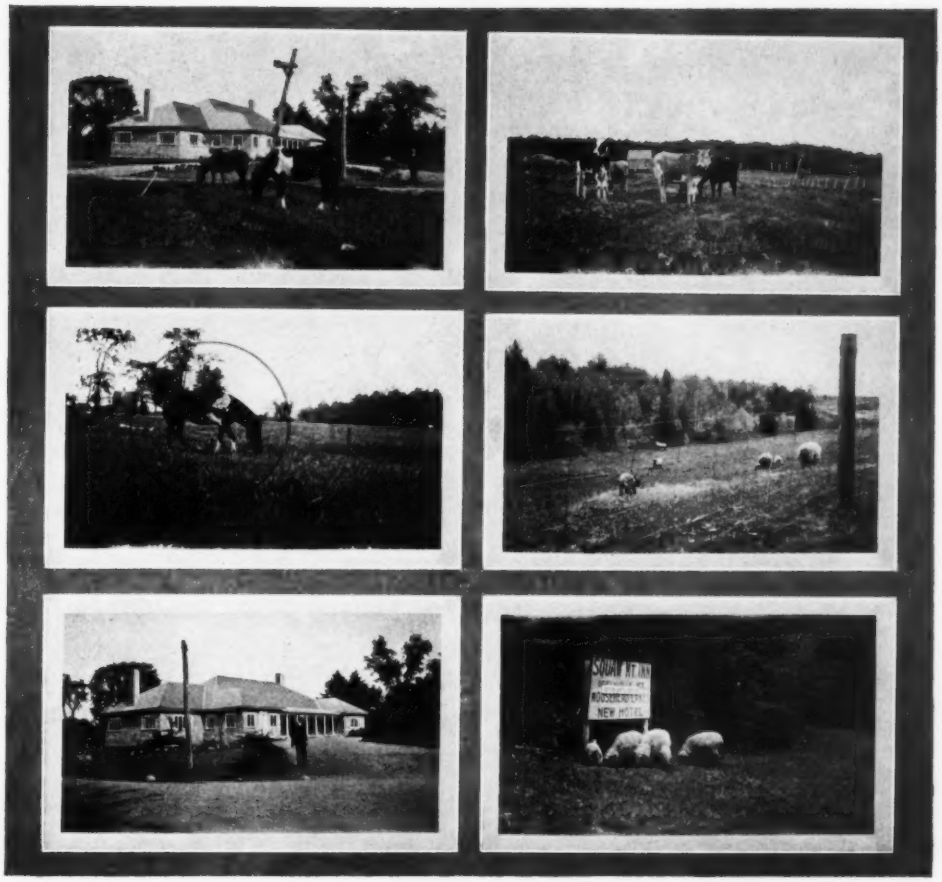


Figure 1
Figure 2
Figure 3
Figure 4
Figure 5
Figure 6

GROUP OF AMATEUR SNAPSHOTS — MARY E. ARCHER

his shot from a point where only the grassy foreground and the woodsy background would be included, which would have resulted in a very pretty picture.

We note that no clouds appear in any of these pictures, though there were clouds in the sky when they were made. Now, an attractive cloud-effect adds one hundred per cent. to the beauty of any picture, and the photographer might easily have obtained such an effect by the use of a sky-filter. This consists of a simple device which slips on over the regular lens, necessitating no change of operation, but bringing out the clouds, which otherwise would be invisible.

And last, but not least, we would urge that the enlarging camera be employed for all good small snapshots; for many which appear commonplace in their original dimensions may be made very beautiful by the process. The minute detail is brought out and emphasised, and much that was practically invisible is made to stand forth in a charming manner. Fractional parts of seemingly worthless negatives may be salvaged thus, for your photo-finisher can mask out any objectionable features.

Study well the photographic catalogs: for listed therein are many simple appliances which aid in making better pictures. And most important of all, read the leading photographic magazines and learn "how the other fellow does it."

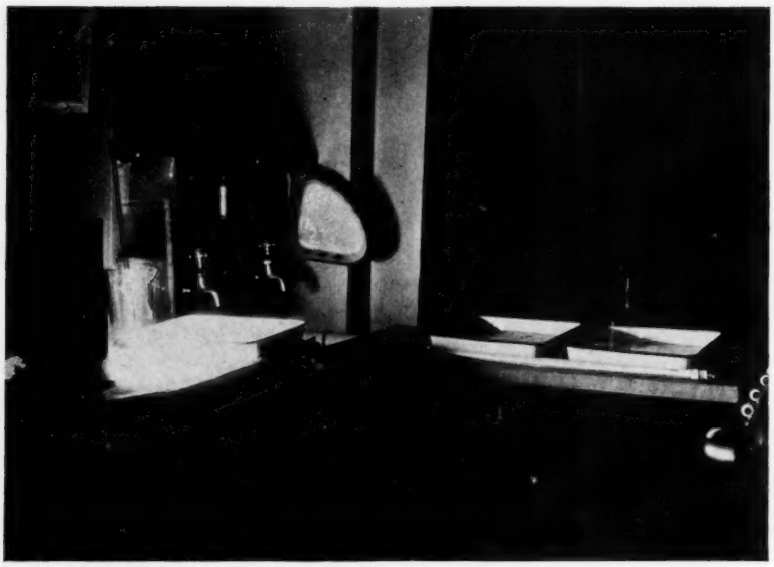


FIGURE 1 IDA W. PRITCHETT

A Convenient Homemade Table for the Kitchen-Darkroom

IDA W. PRITCHETT

THE defects of the small apartment kitchen are many and varied. When used for the purpose intended by the architect, it is hot, crowded, and often inadequate. But with the aid of a few homemade appliances, it can be changed into an ideal darkroom for the amateur photographer.

Even when the kitchen is transformed into a darkroom, there is one defect that is frequently difficult to overcome. There is not enough table-space, particularly if one uses a large camera and consequently needs large trays. In a small apartment, where everything must fold up and do double duty, the disposal of an old table past being hurt by hypo or developer is a problem when the darkroom is not in use. I have solved this problem for myself, and thought my experience might be of interest to other amateurs who use their kitchens as darkrooms.

My kitchen is 7 x 10 feet at its widest points. Actually, these dimensions are considerably decreased by the protruding gas-stove and built-in cupboard on one side, and the sink, covered laundry-tub, and icebox on the other. This leaves a narrow passage-way which, between the sink and the gas-stove, is only twenty-eight inches wide. In this small space one can do a great deal.

It takes me about twenty minutes to "assemble" my darkroom, make up my developer, and start the evening's work. First, newspapers are spread on the floor and on the cover of the laundry-tub. Then the shade is drawn, and over it the homemade black curtain which, though inadequate for any daytime work except the making of prints, renders my kitchen as dark as a pocket at night. If necessary, it can be pegged down along its edges with thumb-tacks.

Now comes the setting-up of the extra table. It consists simply of a piece of board about one inch thick, thirty inches long, and sixteen inches wide. Into the broad surface at one end of this board are screwed three of the heavy metal bands used by gas-fitters to fasten down

pipes. The metal band is so bent that it almost encircles the pipe, and can then be screwed down to the wall on each side, thus holding the pipe rigid. If one of the projecting ends of this band is cut off, there remains a broad hook, very strong, which can be anchored to any desired object by means of the screw holes in the remaining end. I have used three of these cut bands for my "table", though two would probably have sufficed. The thick board holds the screws firmly, so that they cannot pull out. One end of the board rests on the edge of the sink, while the broad hooks on the other end rest on the outside gas-pipe of the stove, itself heavily braced by an iron-and-nickle arm fastened directly to the stove. This makes an absolutely solid table, which is also level. In some cases the height, at one end or the other, might have to be raised or lowered; but in my kitchen this has not been necessary. When not in use, this "table" stands on end beside the kitchen-cabinet, where it is absolutely out of the way; and nothing can hurt it, because it is merely an old board.

Figure 1 shows my darkroom with the extra table set up and all the trays in place. At the extreme right can be seen the pipe of the gas-stove, on which rest the hooks supporting one end of the table, the other end being held up by the edge of the sink. On this table stands the tray of short-stop, or wash water, and to the right of it the tray of hypo. The tray of developer stands on the cover of the laundry-tub, near the darkroom lamp. In the upper left corner can be seen the edge of the towel hanging from the usual kitchen towel rack—not directly over the tray of developer, but within easy reach. In fact, everything is within easy reach, and yet hypo and developer are kept at a safe distance from each other. Moreover, as can be seen, all the ordinary kitchen-utensils that are regularly kept about a sink can be left hanging in their places, because they are not in the way at all. This saves time in assembling and later dismantling the darkroom, and also obviates the possibility of mislaying the cook's favorite scrubbing-brush and being blamed for it the next morning.

This picture was made by the light of the darkroom lamp, using a Series O Wratten Safelight in the lantern with a 15-watt inside-frosted Mazda bulb. It had one hour's exposure, without filter, at F/8, as I remember on Eastman Panchromatic cutfilm. There is some over-exposure and halation in the foreground, near the light, and underexposure of the black curtain covering the window, which shows merely as an expanse of darkness behind the extra table with its two trays. Nevertheless, the details of the arrangement can be clearly seen. It is beautifully compact and convenient, puts hypo and developer where they can do each other the least harm, and allows free access to running water at any moment. During developing, the darkroom lamp can be turned with its face to the wall, thus giving a diffuse, indirect light if the direct light is too strong. This is particularly good if one is using the Series O Safelight and a desensitiser.

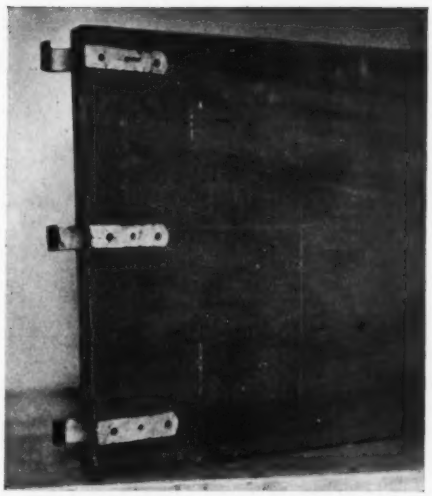


FIGURE 2 IDA W. PRITCHETT

Figure 2 shows in detail the metal hooks and their attachment to the board. The weight of the table is very little, even when the trays are on it, certainly not enough to make this unorthodox use of the gas-pipe in any way dangerous if the pipe is properly attached to the stove.

[In preparing this helpful little article for publication, we could not help letting our thoughts run back through the years to a stiflingly hot summer night. We had a film to develop and the attic was the only available spot in the house. There was no running water, no electric light and an old trunk served to hold the three trays. The windows could not be opened and all water had to be carried up in a pail. This was, perhaps, the most uncomfortable home-made darkroom that we were ever compelled to devise. We have served our darkroom apprenticeship in cellar, bathroom, kitchen, clothes-closet and garret—not to mention service in darkrooms that were darkrooms. We would not have missed these experiences for the world—that's the fun in photography.—EDITOR.]

Extra Money from the Camera

J. E. BULLARD

ANYONE who is able to make a good sharp picture and has a camera large enough for good eight-by-ten enlargements to be made from the negatives can make his camera earn money. As a matter of fact, more and more people are coming to rely upon a camera for their entire living. A two-and-a-quarter by three-and-a-quarter-inch negative will often make a perfect enlargement; but the size that is most popular now seems to be the three-and-a-quarter by four-and-a-quarter size. A good lens is important, because it permits one to get more pictures; but with any lens one can make good photographs under favorable conditions. The only advantage of the expensive lenses is that they permit of making pictures under unfavorable conditions and also of making action-pictures.

There are two classes of pictures which sell most readily. One is a picture with a pretty girl or woman in the foreground. The other is the action-picture. By action-pictures are meant those pictures that must be made with a fast shutter and a fast plate. Such pictures are those of jumping horses, racing horses, speeding automobiles, trains, divers caught in a graceful pose before they enter the water, and the like. Such pictures, of course, require a great deal of practice and the very best of equipment. They are not for the beginner.

The genre picture, that is, the picture of people doing something in a natural way—an old lady knitting, a little darky eating watermelon, haying-scenes, and the like—is a ready seller, if the pose is perfectly natural and the picture tells a story. Genre pictures are not difficult to make if the person in the picture can be persuaded to keep his mind on what he is doing rather than on looking at the camera. Pictures that sell must almost invariably have some people in them, though good animal pictures will sell if they are out of the ordinary.

A point that must always be observed in making pictures to sell is to be sure that all the subject is in the picture. For example, a woman made a picture of a boy and a dog. She caught a splendid expression in both the dog's face and the boy's face. The poses were fascinating. Many prints could have been sold of that picture at around three dollars each, had it not been for the fact that the feet of the boy did not show. His legs were cut off in this picture between his feet and his knees. Had she moved back just a few steps and included the whole of the boy, the negative would have been worth a good deal of money. As it was, it was worth nothing except for making prints for the family album.

No contact prints should be submitted to possible buyers unless a large camera is used. Only eight-by-ten enlargements should be sent out, and often such enlargements may well be made from only a part of the negative. This is one reason why it is a good idea to have a camera making pictures as large as three-and-a-quarter by four-and-a-quarter inches. It may happen that only half of the negative will be used in making the enlargement.

If one makes his own enlargements, he can experiment with the enlarger, masking out more or less of the negative until he arrives at what he considers makes the best-looking picture. If one has a finisher make his enlargements, then it is a good idea to have contact prints made first.

Lay a print on a table, then with two L-shaped pieces of cardboard cover up different portions of the print and view what is left with a reading glass. Use a good-sized glass and it is possible to get a very good idea of how that picture will look enlarged. After a little practice, one is able to pick out of the picture that part which makes the best-looking picture. When this is done, draw pencil lines showing the portion it is desired to have enlarged and instruct the finisher to enlarge this part of the negative to eight-by-ten inches. Also insist that it be enlarged on glossy paper and dried on a ferrotype plate.

The prints that sell best are those that are clear, sharp, and glossy. Dull prints do not reproduce as well as glossy prints.

So much for the kind of pictures that sell. The next step is to sell them. The nearest good market is usually the local Sunday paper, provided that paper has a picture-section. The price usually paid for prints to be used in this section is three dollars each. Some of the large city papers will pay several times that price for especially good pictures.

For example, a few years ago a man caught a mouse in his house. Instead of killing that mouse he put it in a cage and fed it while he tried to think of some good way to use it in a picture. Finally he hit upon a cheese-house.

At the grocery store he bought a piece of cheese and hollowed it out to form a little house for the mouse. In one side he carved out a little door. Placing the mouse inside the piece of cheese and placing both in the best possible light, he made a

ON GUARD—GR-R-R-R!
JAMES W. AUGHILTREE
HONORABLE MENTION—OUTDOOR-GENRES

BACK OF THE GROCERY — E. PAUL FLEMING

HONORABLE MENTION—OUTDOOR-GENRES

number of exposures. Out of the lot he had one negative that satisfied him. From this he made an eight-by-ten enlargement on glossy paper and the first print he sold brought him fifteen dollars.

By using some ingenuity one can often obtain pictures that are sufficiently out of the ordinary to bring more than the usual price. It is just a case of thought and study.

In addition to the local newspaper, there are all the other newspapers that have Sunday picture-sections. All these papers are usually in the market for any photographs that have wide general interest. If one does not want to sell to them direct, he can sell to the concerns that make a business of selling photographs to newspapers, magazines, and other markets. Such a concern is the Underwood & Underwood Company in New York City.

A good many magazines buy photographs. "Where and How to Sell Manuscripts", published by the Home Correspondence School in Springfield, Mass., lists fifty-six different markets for photographs. A good many of these are magazines. "The Standard Rate and Data Service", published in Chicago, lists no fewer than seventy-five newspapers having rotogravure sections. Most of these newspapers at least are in the market for photographs. Lithographing companies are usually on the lookout for good photographs. Calendar companies need photographs. There are some manufacturers who will pay good prices for photographs showing their products being used. As a matter of fact, there is a possible market for any good picture that has any special interest.

Some people have made money by making postcard-size photographs of the interesting things and scenes in their towns and selling these printed on postcards. One man claims to have made ten dollars a day doing just this.

As has already been said, an expensive equipment is not necessary to make extra money with a camera. Most people now own a camera of some sort. That camera can be used at the start; but, of course, one has to learn how to use it. Ordinary snapshots do not sell. Each picture must be of such a nature as to interest those who do not know the subjects. Perhaps the easiest way to learn what kind of pictures sell is to study the picture-sections of the Sunday papers. Study those of the local paper or papers and also those of the large city papers.

Try to find out what there is about the pictures that makes them interesting and then try to put the same interest in pictures you make. If one goes at it in this way, he is likely to be surprised

at the progress he makes in developing his faculty of picking out interesting things to photograph.

Before buying an expensive outfit it is best to make this study. It is best to learn how to make pictures that sell. After one has learned, then he can easily sell enough prints to more than pay for the very best equipment on the market. Making the old camera earn the new equipment is certainly more satisfying, and when it does this the new equipment will also prove more profitable; for in the meantime one has learned how to use that new equipment in such a manner as to make it earn the maximum of extra money.

So, though the present camera be nothing but a moderate-priced Brownie, it is best to keep it and learn how to get the very best possible pictures with it. The concern buying prints doesn't care in the least what kind of instrument was used in making the picture. Their sole interest is in the picture itself, unless the concern is a photographic concern buying prints of pictures made with its particular brand of goods. This latter market, however, is not a big one compared with the possibilities in other markets.

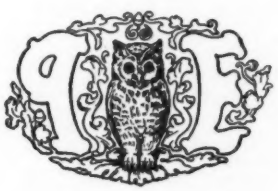
In addition to the regular markets for prints, there is an opportunity to make up Christmas cards and other cards for one's friends and neighbors. These usually include pictures of the family or at least some member of the family. Since the picture has to be small, anyhow, it may be made with a small camera as well as a large one. One way of making up these cards is to choose the picture that is to go on a particular card, and if the picture has not been made, make it. The next step is to write or select the greeting to be used, also any other decorations that are to adorn the card. All decorations may well be photographic.

On a card somewhat larger than the final card is to be is pasted the picture in the proper position. This is cut out in the form it has been decided will make the greatest appeal. Then the greeting is either lettered in by hand or a printed greeting pasted in the proper place on the card. Any decorative design may be pasted or drawn on the card.

Unless the card is very heavy and not at all likely to warp, it is better to use rubber cement rather than paste as an adhesive. The rubber cement does not cause any warping. Besides, after anything has been stuck down it can be easily removed and placed in another position if desired. Perhaps most important of all, however, is the fact that if too much adhesive has been applied, and the pressure put on the paper to bring it in close contact with the card causes the rubber cement to squeeze out from the edges, the surplus cement can be rubbed off with one's fingers when it is dry and leave a clean, neat-appearing job.

After the card has been made up, a camera with a long bellows extension will be required to copy it. The card is set up in good light and the cameras are placed in front of it. The camera is focused and a picture made of the card. Then from this negative as many prints of the card as desired may be made.

If the camera one has does not have a long bellows, one can be improvised by exercising a little ingenuity. The total extension will need to be about twice the focal length of the lens. By taking a light-tight box, connecting one end to the negative end of the camera and using a piece of tracing cloth at an opening in the other end of the box for the purpose of focusing, one can work as effectively as though he had a long-focus camera. The box should be as long as the present bellows extension of the camera, if that extension is a short one, and some means will be needed of holding a plateholder, so that the plate will be exactly in the same plane as the tracing cloth used for focusing. It is just a matter of exercising ingenuity to make the equipment one already has earned him extra money.



FISHING
WILLIAM F. HAPPICH
HONORABLE MENTION—OUTDOOR-GENRES

EDITORIAL

Those Long Winter-Evenings

DURING the happy Christmas season of the year, our hearts and minds seem to open to the reception of thoughts and ideas that we seem too busy to receive at other times of the year. Perhaps the holiday season gives us a bit more time to think things through and to decide upon a course of action calculated to result in a definite advance in our own material and spiritual betterment. In photography lies a remarkable source of intellectual power. It matters little whether we approach it from the point of view of the business man, the engineer, the chemist, or the pictorialist. Still photography and motion photography have become such a vital part of modern industrial, scientific, and artistic life throughout the world that today it has become recognised and understood as never before. It has reached the point where it is admitted to be rendering a very real service to mankind. We hope that our readers will feel with us that in photography we have an art and a science of which we may well be proud, especially at the end of another year of remarkable progress.

As we consider what photography has done and is doing in all the ramifications of modern life, we cannot help noting its effect upon the home-life of many people. To most of us who have taken any part at all in fraternal, community, and social activities, the phrase "those long winter-evenings" has become something to be hoped for in our home-life. The advent of motion-pictures in the home is turning the tide of home-hungry men and women from more or less shallow and valueless activities back to the fundamentally sound family evenings at home. Many fathers and mothers, through amateur movies, are becoming better acquainted with their children and learning to play with them and to enjoy them in a wholesome, normal way. Perhaps the one thing left in the United States that is not overorganised is life in the home. If amateur movies are bringing about "those long winter-evenings" at home, they are rendering a service which is far-reaching in its beneficial effect upon American home-life. We by no means advocate giving up the many splendid activities which are really constructive; but we do believe that there are bridge-playing mothers and club-frequenting fathers who will be the better for becoming amateur movie-producers for their children.

It may not sound very "ritzy" or be very "whoopee" to spend a quiet evening at home making enlargements or mounting vacation-prints in an album; but who will say that it is not a good thing to do mentally and physically? Most of us take far better care of our automobiles than we do of ourselves. Yet the human body has a limit of endurance, even as there is a limit to the power and speed of an automobile. If amateur movies are drawing many back to the home fireside, modern still photography is appealing to those who may have neither home nor family. By means of developing-tanks and compact equipment and accessories, the occupant of a "one-room apartment" on the fourth floor back can spend many a profitable "long winter evening" in the house, if not "at home". In fact, it may be said that in photography many a man or woman has found quiet comfort while far away from home and family. When properly mastered, photography serves a vital need in the life of the man and woman who is living under the high tension of business and social demands. There is something about the soft red light of the darkroom and the mellow light of the printing-room which seems to soothe and to quiet jangling nerves. The very fact that photographic processes must be carried on accurately and slowly tends to hold in check the urge to "step on it" and to speed up. The large number of busy physicians and other professional men who are pictorial photographers proves our point. So many of our recreations and so-called relaxations require physical or mental activity that we all need something which brings out our creative abilities without adding to our already overtaxed strength. Photography in its several branches is meeting a very real need of modern times for a constructive instead of a destructive pastime.

And so, at this Christmas season, let us be thankful that we have amateur and professional photography ready to meet human needs in a variety of ways; and that the New Year, just ahead, holds for us all a greater day of photographic opportunity and true service.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Advanced Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $3.00.

Honorable Mention: (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the publishers.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded will receive a neat silver cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes may be chosen by the winners, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books. If preferred, the winner of a first prize may have a silver cup, suitably engraved.

No Prize or Honorable Mention pictures are sold, exchanged or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

All competition-pictures not returned are used to make up the PHOTO-ERA PICTURE EXHIBIT which is sent to schools, libraries, museums, camera clubs, and to responsible organisations for exhibition-purposes, *free of cost.*

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. Not more than two subjects may be entered. *Composition, exposure and photo-finishing must be done by the competitor.*

3. Prints on rough or linen-finish surface, and sepias, are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations and detail. Prints may be mounted or unmounted.

4. Each print must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer, and printing-process. Enclose return-postage. Data-blanks sent at request.

5. Prints receiving Prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he shall have received official recognition.

Photo-Era Prize Cup

6. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces is sent with data.

7. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right angles to each other.

8. Competitors who have won three first prizes within a twelvemonth become ineligible to receive prize cups in this competition for *one* year thereafter.

AWARDS—ADVANCED COMPETITION
Subject—OUTDOOR GENRES
Closing September 30, 1929

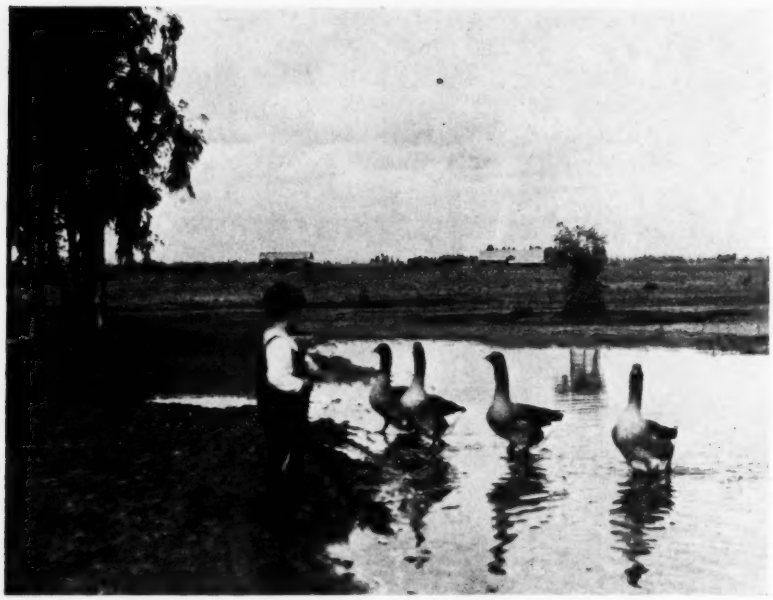
First Prize . . . . . George W. French
Second Prize . . . . . Maude Lee Eldridge
Third Prize . . . . . George Miller, Jr.

Honorable Mention: Arthur W. Ambler; James W. Aughiltree; Matthew S. Beros; Mary Callaghan; Daisie B. Chapell; A. W. Clark; Charles Clayton, Jr.; Thornton W. Dennis; Beatrice M. Dine; J. H. Field; E. Paul Fleming; M. Gurrie; William L. Haemer; William F. Happich; H. P. Herron; U. Stephen Johnson; Dr. Maximilian Kern; Dr. K. Koike; Alma R. Lavenson; L. H. Longwell; Melvin Martinson; Kate S. Matthews; John C. Moddejonge; N. J. Nalawalla; Glendora Nichols; M. A. Obremski; A. J. Pandian; Godfrey Priester; Leonard Purin; J. W. Russell; J. Herbert Schneider; L. H. Schneider; Edna Seaton; Henry Sill; Dr. Max Thorek; A. M. Tomlinson; J. N. Unwalla; J. A. Weiss; G. P. Wright; William O. Yates.

HORSE-POWER

FIRST PRIZE—OUTDOOR-GENRES

GEORGE W. FRENCH



Second Prize

ADVANCED
COMPETITION

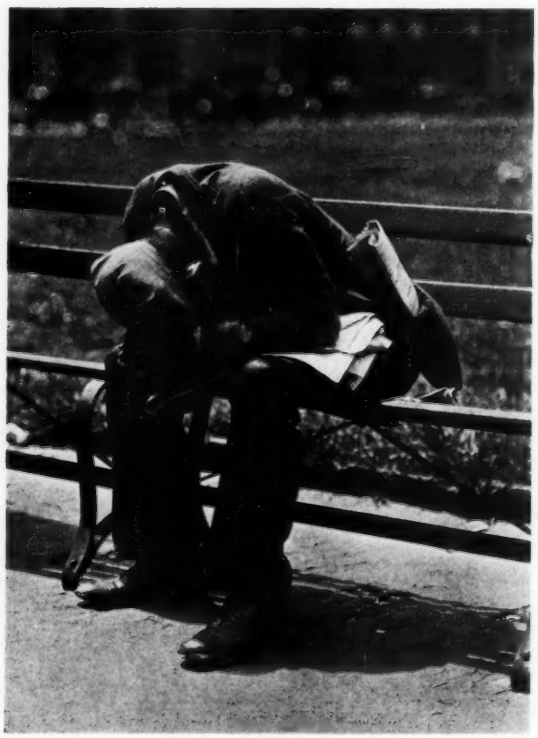
OUTDOOR-GENRES

BOY FEEDING GEESE — MRS. W. F. ELDRIDGE

Third Prize

ADVANCED
COMPETITION

OUTDOOR-GENRES



FAILURE — GEORGE MILLER, JR.

SUBJECT FOR NEXT COMPETITION

ADVANCED WORKERS

Subjects for Competition—1929

"My Home." Closed January 31.
"Portraits." Closed February 28.
"Indoor-Genres." Closed March 31.
"Miscellaneous." Closed April 30.
"Artificial Light Photographs." Closed May 31.
"Architectural Subjects." Closed June 30.
"Pictures of Children." Closed July 31.
"Miscellaneous." Closed August 31.
"Outdoor-Genres." Closed September 30.
"Animal Pictures." Closed October 31.
"Water-Scenes." Closed November 30.
"Miscellaneous." Closes December 31.

My Home

THE competition devoted to the pictorial treatment of our own, or some one else's, home appears to have increased in popularity from year to year. At first the subject seemed to present too many problems for the average contestant to master. It seemed to be a difficult matter to decide upon a method of treating the subject. However, it is apparent from the pictures submitted during the past two years that our readers are catching the thought which prompted the selection of this subject. We are still old-fashioned enough to believe that a real home, with our loved ones in it, is the best place in all the world. It matters not whether it be a palace or a cottage—a home is not a matter of size or decoration, but a true expression of the heart.

We admit that to depict the atmosphere of a real home is a difficult task. However, it has been done in this competition in the past, and it can be done again. Much of the success of the attempt depends upon the pictorialist himself and his skill in conveying to the plate or film those features of his home that are of greatest value to him. It may be the location, an ivy-clad window, a flower-lined path to the front door, a view through the sun-parlor, or the interior of the living-room. Usually, there is one feature about a home that appeals most to those who love it. It is this feature that this competition is designed to bring out by means of photography. This is an excellent opportunity to prove that the camera can portray the things "that lie too deep for words".

A. H. BEARDSLEY.

THE OLD HOME — DR. B. J. OCHSNER

EXAMPLE OF INTERPRETATION

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA MAGAZINE, Beginners' Competition
Wolfeboro, New Hampshire, U.S.A.

Prizes

First Prize: Value $7.50.
Second Prize: Value $3.50.

Honorable Mention: (*a*) Those who win an Honorable Mention Award and are *not regular subscribers* will receive PHOTO-ERA MAGAZINE for six months with the compliments of the publishers.

(*b*) Those who win an Honorable Mention Award and are *already subscribers, or have been subscribers,* will receive an Honorable Mention Certificate. Those who win ten of these certificates and send them to us to be recorded, will receive a neat silver cup, suitably engraved. There is no time-limit. However, ten certificates must accompany all requests for the cup.

Prizes, chosen by the winner, will be awarded in photo-materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA MAGAZINE, or in books.

No Prize or Honorable Mention pictures are sold, exchanged or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all scales, *excepting halftones,* go to the maker of the picture.

Rules

1. This competition is open only to beginners of limited experience with practical camera-activity. *Composition, exposure and photo-finishing must be done by the competitor.*

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints and enlargements up to and including 8 x 10 inches.

4. Prints representing no more than *two* different subjects, for any one competition, and printed in any medium except blue-print, may be entered. Prints may be mounted or unmounted, as desired.

5. Prints on rough or linen-finish surface, and sepias, are not suitable for reproduction, and should be accompanied by smooth prints having the same gradations.

6. Each print entered must bear the maker's name and address, the title of the picture, and the name and month of competition, and should be accompanied by a letter, *sent separately,* giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent at request.

7. Prints receiving Prizes or Honorable Mention become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives *after* he has received official recognition.

8. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with data.

9. Prints should be carefully packed between two layers of cellular board so cut that the corrugations run at right angles to each other.

PHOTO-ERA MAGAZINE
The American Journal of Photography
Wolfeboro, New Hampshire, U. S. A.

THIS is to certify that an Award of PRIZE
is hereby given to the picture entitled

entered by

in the PHOTO-ERA MAGAZINE Monthly Competition

which closed 192

Editor

PRIZE-WINNERS' CERTIFICATE

PHOTO-ERA MAGAZINE
The American Journal of Photography
Wolfeboro, New Hampshire, U. S. A.

THIS is to certify that an Award of *Honorable Mention*
is hereby given to the picture entitled

entered by

in the PHOTO-ERA MAGAZINE Monthly Competition

which closed 192

Editor

HONORABLE MENTION CERTIFICATE

AWARDS—BEGINNERS' COMPETITION

Subject—MISCELLANEOUS

Closing September 30, 1929

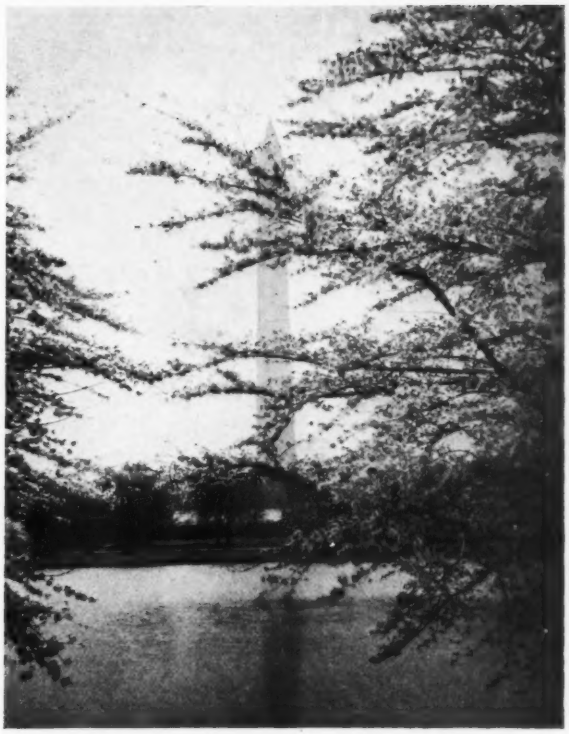
First Prize . . . . . Paul Clifton
Second Prize . . . . . Wilbert W. Lee

Honorable Mention: Elizabeth Culbertson; J. Daniels; R. E. Davies; M. Fox; Gladys L. Gilman; M. Itoh; Dr. Davies Lazear; Walter Lipkau; Y. Osada; Edwin A. Reeve; Gaston Remy; Carl E. Shaw; Charles H. Smith; W. H. Smith; Frank L. Weaver.

First Prize

BEGINNERS'
COMPETITION

MISCELLANEOUS



MEMORIALS — PAUL CLIFTON

Second Prize

BEGINNERS'
COMPETITION

MISCELLANEOUS

DUSK — WILBERT W. LEE

OUR ILLUSTRATIONS

ERNEST H. WASHBURN

By a singular circumstance, the present reviewer is favored for the second consecutive time in having the story of one of his friends featured among those who are telling the "why" of their photo-pictorialism. Fully aware of the stigma which attaches to the reputation of being a member of the "I-knew-him-when Club", he will venture the statement that he has known Raymond Hanson for several years, and that Hanson is a pictorial photographer because he loves nature in her pictorial aspects and yearns to reproduce her loveliest moods. His great technical skill enables him to do this with remarkable success, and his prints tell us what he *felt* as much as what he *saw*. In "After the Storm", he saw trees, snow, a house, sky; but we feel sure he felt the beautiful purity and serenity of the new snow on the ground and on the house, the clean hardness of the birch-tree bolls, and the decorative tracery of branches against the sky. And these few, simple objects he patterned into a picture that he might enjoy, and at the same time share his enjoyment with other appreciative observers, who could see and feel with him.

Data: Made at Wolfeboro, N.H., in January; bright sun; Smith soft-focus lens; 6-inch focus; stop, F/8; 3-times color-screen; 1/5-second on Orthonon plate. Pyro developed and enlarged on Glossy Bromide.

Mr. Arthur L. Marble has submitted five examples of the work of the members of the Los Angeles Camera Club, for the study and pleasure of our readers. The first of these, "Armida Vendrell", by Arthur F. Kales, is a beautiful example of idealised portraiture. Although the print before us is a copy of the original, it well displays the artistry of Mr. Kales, in the pose, the concentration of interest upon the face, particularly the eyes, and the gesture of the uplifted hands. The delicacy of the beautiful lace mantilla upon the head and enveloping the figure is convincingly rendered. No data.

In R. L. Van Oosting's "Sierran Evening", we are made to feel the grandeur of the mountains and valley, flanked at the right by the huge peak of solid rock, giving defiance to the elements, from time unknown and for ages to come. The beautifully cloud-decorated sky creates for us a feeling of scale and distance, without which we should lose much of the nobility of the scene. No data.

"The Sentinel", by C. L. Southard, is a decorative theme, in every sense. The masses and tones are few but effective. The bent trunk of the tree tells us of its struggle against the mighty winds, which forced it to bend to their will. But it still stands, overlooking the valley and dimly-seen distant mountain-peaks. No data.

"The Colonnade", by Frank C. Elliott, is interesting as a study. The inclusion of human figures serves to give us a measure for the size and height of the columns as well as an effective balance for the dark mass overhead. The alternating strips of light and dark at the right are not so pleasing, and a liberal half-inch should be trimmed away, eliminating the widest of them. No data.

Claude C. Williams's "Pattern" arrangement is interesting, but rather too contrasty. It is unfortunate that the central pile nearly bisects the picture. The points of real interest are the little boy playing in the sand and the surf seen through the piling; but as a whole the picture is not pleasing. No data.

What an odd conception is "Thirsty", by Henry Sill. It is truly pre-eminent in two respects, originality and spontaneity. There is no lack of action on the part of the youngster, and we wish a more rough-and-ready dress had been worn, rather than the spick-and-span, freshly laundered white. The efforts of the "kiddo" to obtain a drink without getting wet, are comical. Coiling the hose in a snake-like spiral was a clever idea. For pure technical excellence, the picture is unbeatable; perfect work, from focusing to finished print.

Data: Graflex 3¼ x 4¼ camera; Tessar lens of 7½ inches' focal length; stop, F/8; 1/25-second exposure in July at 3 P.M.; bright sun; Eastman Panchromatic cutfilm; pyro-elon tray developed; enlarged on Velour Black, Veltex.

The group of beautiful scenic views illustrating Charles C. Blanchard's fine article on the Yosemite National Park displays not only Mr. Blanchard's knowledge of selective composition, but also his marked technical ability, and familiarity with the terrain of that locality. Rarely, if ever, have we seen so interesting and beautifully rendered a collection of this subject. For beauty of subject and rendition, they are reminiscent of, and comparable in every good quality with, the world-famous Swiss Alpine scenes of G. R. Ballance. The first of the series is, to our taste, the best. Although probably more orthodox in composition, it gives a stronger feeling of the extreme heights from which the water comes than do the others, excepting, possibly, the lower left picture of the group. This sense of height and sheer declivity is made more convincing by reason of its appearing well above the tops of the tall conifers on both sides. The lighting was well chosen to enhance the natural beauty of the landscape.

Data: Ica Juwel camera, 5 x 7; Carl Zeiss Protar, 7½-inch; stop, F/16; 2-second exposure in June, on Eastman Panchromatic film; pyro developer. Bromide enlargement.

Print No. 2, "From the Foot of the Falls", is perhaps not so well balanced as the others, owing to the cascade's being placed so far to one side. A judicious trimming from the other side helps it.

Data: Same camera and lens; F/8 stop; 1/25-second. Other data, same as No. 1. The full use of swing-back was made on both this and the preceding.

"Yosemite Falls Through the Trees", No. 3, is a charming vista. Darkening the extreme foreground would compel more attention upon the falls.

Data: Same camera; 8¼-inch Protar; stop, F/16; 1/5-second exposure.

Yosemite Falls from back of "Old Village", No. 4, although apparently a close-up, is in reality a long-range shot and demonstrates the value of the corrected single element of the lens. The effect of dashing, wind-blown water is very realistic.

Data: Made at a range of about two miles from the falls, with single element of 8¼-inch Protar; F/16, 1/5-second, with K-2 filter.

"Merced River from El Capitan Bridge", No. 5, is indeed a beautiful scene, and one to inspire and delight We should very much like a few fleecy clouds in the sky, but possibly that is hypercritical.

Data: Made with 8¼-inch Protar; stop, F/11; 1/5-second, against the light, at 9.30 A.M.

"Half Dome and Washington Column", completing the series, is a fine composition. A little flatness of tone in the foreground might be corrected by deeper local printing or shading-in. It appears to be over-exposed or overcorrected.

Data: Made with 7½-inch Protar; stop, F/8; 5-second exposure, with K-2 filter, at 2 P.M. Same materials.

For concentration of interest and story-telling qualities, it would be difficult to imagine a better example than H. P. Herron's honorable-mention picture, entitled "Signs of Spring". The artist has also gathered all his contrasting lights and shades within the central area of the print, which of itself centers the interest, and relieves the figures against the surrounding darker tones. In truth, the immediate foreground appears somewhat overdone in that respect. Nothing could be more lifelike than the colored boy, in pose or expression. His mate, too, is almost equally good. They are "knuckling-down hard", a condition well known to the American boy. The broad back view of the other boy was a mistake, if posed. Being nearest the camera he monopolises almost half the picture. A step to the left on the part of the photographer would have produced a great difference in his outline, besides showing part of his face. It was one of those small items which make or mar a picture—easy to correct at the outset, but impossible to overcome afterwards. No data.

Mary E. Archer has chosen to show how-*not*-to-do-it, in her series of six prints, selected to illustrate her article. They are bristling with the errors common to the button-pusher type of photograph. It is to be hoped they will meet the eyes of those who need them most.

The print of the kitchen darkroom, on page 312, is so "natural" that we cannot pass it without comment. Many an amateur has no better equipment; in fact, some have not so good. Enthusiastic camerists need not be deterred by lack of elaborate darkrooms.

"On Guard, Gr-r-r-r-r", by James W. Aughiltree, is original in conception, but the question arises, "Who is on guard, the dog or the man?" The latter's white hair surely dominates the picture, and the dog is at first entirely overlooked. We should suggest that the idea is good enough to be worth further effort.

Data: Made in northern New Jersey, in October, shortly after sunrise; Ica Juwel, with Zeiss F/4.5 lens; about 1/25-second exposure at F/5.6; camera held in hand. Agfa cutfilm; Amidol developer; Tumagas paper; Amidol developed.

"Back of the Grocery", by E. Paul Fleming, is typical of what may happen when business is not pressing. The figures are excellent and true to life. The "properties", also, are what we frequently find back of the grocery. The window, however, is far too much in evidence, with its glaring spot of reflected highlight, the most intense in the picture. By covering it, a vast improvement is noticeable. The figures should have been posed before the plain wall, more toward the right, and part of the window trimmed off. The dirty, stained wall would have been hidden by the checker-player. As in the picture of the marble players, a moment of preparation, before exposure, would have spelled success. The figures and action are so good that it is unfortunate that adequate preparation was not made. No data.

According to Isaak Walton, one thought connected with "fishing" is that of repose and quiet. In the picture by this title by William F. Happich, a few changes would further this idea. Were it ours, we should change it into a horizontal, by trimming at the base just below the central water-plant, eliminating its reflection, and by subtracting a like amount from the top, to balance, thus bringing into prominence the horizontals and furthering the feeling of tranquillity. The fisherman furnishes all the action necessary. A careful toning-down at the extreme ends of the light line of water under the background should then be effected, in order to overcome its bisecting tendency. Then there should be, perhaps, a slight darkening of the white hat. Deeper printing or further developing of the print is suggested, as being more truthful in values. One other thought comes to us; namely, the landscape features of this picture are so strong and the figure so comparatively small, that it falls almost within the landscape-with-figure designation, rather than genre.

Data: Made in Toms River, N.J., in August, at 1 P.M.; Century 4 x 5 camera; Collinear 8-inch lens; stop, F/11; 1/25-second exposure, with K-1 filter, in bright diffused light, on Agfa filmpack; Amidol developer. Enlargement on P. M. C., No. 6.

Advanced Competition

In a competition which requires a definite type of subject in order to be within the classification specified, it is important that competitors choose their entries with great care. For example, in the present competition for Outdoor-Genres, it is a prime requisite that the genre principal shall predominate. If the story-telling quality is subordinate, the picture is more properly classified as landscape with figure, or figures. Most of the pictures submitted do qualify, but intending entrants will do well to scrutinise their prints very critically before entering them. They might fail to qualify for the classification entered, but be winners in their proper classes.

The first-award print in this issue fulfills the classification perfectly. The horses and farmer dominate, especially the former. Hence the title, "Horse Power". Mr. French chose his setting well, the bush at the left and trees at the right breaking up the horizon and preventing any feeling of monotony. The plodding animals show good action, since they are well set into their pull, as the taut traces show. The farmer is strictly attending to his job, which is commendable. It was a well-planned and well-executed shot. One thing we should prefer otherwise; namely, the hand-drawn clouds. A suitable cloud negative should have been employed. "Mare's-tail" clouds are, no doubt, appropriate in a horse picture, but are, in this case, rather obviously worked in.

Data: Ica camera; F/4.5 lens of 6-inch focus; stop, F/6.3; 1/350-second, in August; bright sun; Eastman filmpack, developed in pyro-metol; Azo buff print from enlarged negative.

Mrs. W. F. Eldridge's second-award print has that quality of out-of-door-ness which always attracts, and the human interest which compels our attention. There is always an appeal in pictures of children with birds, or animals, when well combined to tell a story. In the present picture the interest is all within the lower part, although the distant farm-buildings give play to the imagination. The interesting group of boy and geese tells the story well. The sky area is so similar in size and tone to that of the water that we

may take away a small portion at the top, thereby correcting that fault, and also raising the strip of land from the exact center of the picture, which it now occupies. The tree at the left is a much too solid black. Proper shading when making the print would overcome that. We should prefer the focus sharper on the boy and less sharp on the background.

"Failure", by George Miller, Jr., is a convincingly told story. We are reminded of the Salvation Army motto, "A man may be down, but he is never out." The attitude of utter dejection and submission to fate is all too strongly evident. The work is so well done that we dislike to draw attention to the circular spots in the background, which should be spotted out.

Data: Graflex, 4 x 5, with B. & L. Tessar; 1/75-second at F/5.6; July, 12.30 P.M.; Standard Orthonon plate; metol-hydro developer. Enlarged on Gevaert Novabrom, vigorous.

The delightful picture of the "Old Home" is published here, a second time, and worthily so; for it is a beautiful example of pictorial expression.

Beginners' Competition

BEING unrestricted as to classification of subject, this competition gives free rein to enter any picture considered worthy and consequently brings out some unique pictures of which the present first-prize winner "Memorials", by Paul Clifton, is a fine example. The thought of the beautiful cherry-blossoms as memorials, as well as the monument, so delicately suggested, is a very fine one. A lovely softness, due to the rain, pervades the picture, and furthers the devotional quality of the theme.

Data: F/4.5 lens, of 5-inch focus, used at F/16. Exposure, 4 seconds, on a rainy day in May, at 2 P.M., on Eastman filmpack, pyro developed. Enlarged on Velour Black.

The picture entitled "Dusk", by Wilbert W. Lee, receiving second award, is well done and has good qualities, but has not the feeling of dusk, as we understand it. The sky is much too light and the shadow details are too apparent. A much shorter exposure—indeed, one-half to one-quarter that given—would have recorded all the details necessary and would have resulted in a picture truly dusky. The many artificial lights would then have given a further sense of realism. If possible to do so, we suggest going to the same spot and trying again. The subject seems to merit it.

Data: Voigtländer camera, 2¼ x 3¼; Skopar lens of 10.5-cm. focal length, used at F/5.6, at 7.45 P.M., Eastern Standard time. Exposure, two minutes on Agfa film. Pyro developer. Enlarged on P. M. C., No. 7.

"TWELVE O'CLOCK AND ALL'S WELL—MERRY CHRISTMAS!" WILLIAM F. HAPPICH

THE EDITOR'S CORNER

Merry Christmas and a Happy New Year!

THERE is something about the Christmas season that touches the heartstrings and opens our minds to the reception of those finer and deeper things which, somehow, through the year we seem to pass by. To be sure, we think of our friends and they think of us; but in the rush of business and professional life there does not always seem to be the free time to send greetings or to call. However, at this Christmas season we do find the time to send out to our friends, near and far, that message of good will which has lost none of its freshness and power after centuries of use. And so, as we look out across the hills, we thank all those who during the year have helped us to carry on and those who by their patronage have made possible such progress as we have made. To readers, subscribers, dealers, and advertisers, one and all, we send a sincere wish for a Very Merry Christmas and a Very Happy and Prosperous New Year.

Photo-Era Trophy Cup Scores

ALTHOUGH we believe heartily in all practical and commonsense agreements and pacts to preserve national and international peace, it is apparent that there are two photographic organisations which feel that the sword is the only way to determine who shall possess the PHOTO-ERA TROPHY CUP in June, 1930. The Fort Dearborn Camera Club, which so nearly won the cup for 1928–29, jumped to first place in the October competitions, and the Photographic Club of Baltimore is now in second place after holding the lead for over a year. There is every indication that peace pacts will be forgotten and that both clubs will open fire with such a barrage of prints that the outcome will be nip and tuck from now on. Fortunately, this private war is carried on in the best of good nature and friendly rivalry, and that is where the incentive and pleasure comes in to add interest and benefit to our competitions.

In the Advanced Competition, Mrs. Elaine H. Kern of the Fort Dearborn Camera Club won Second Prize, and she was the only prize-winner who was a club-member. In the Beginners' Competition, Edwin Reeve, also of the Fort Dearborn Camera Club, received Second Prize and was the only prize-winner to be affiliated with a club. Thus the Chicago club won the two Second Prizes of the competition. Furthermore, it received four Honorable Mentions. The Photographic Club of Baltimore received two in the Advanced and two in the Beginner's Competition. The Toronto Camera Club won two Honorable Mentions. The Cleveland Photographic Society, Seattle Camera Club, Syracuse Camera Club, Schenectady Camera Club, and Brooklyn Institute received one Honorable Mention each. We take this opportunity to welcome the Schenectady Camera Club to the race—the more the merrier for all. According to our records as of November 5, 1929, the standing of the "belligerents" is as follows:

Fort Dearborn Camera Club	10½
Photographic Club of Baltimore	8
Cleveland Photographic Society	3
Brooklyn Institute	2
Seattle Camera Club	1½
Toronto Camera Club	1½
Syracuse Camera Club	1
Photographic Society of Philadelphia	½
Schenectady Camera Club	½

Special Note:—Beginning with the January, 1930, issue, the PHOTO-ERA TROPHY CUP scores will be given regularly in our department "Here, There and Everywhere". We need the space on this page for chats with our readers; and, after all, scores of any kind really belong in the news rather than the editorial section of the magazine.

Our January, 1930, Number

IT seems to be a product of the times to become a bit noisy in speaking of the merits of something new. Such phrases as "best in the world", "best in town", "the best in its field", and so on have lost their value because of their misuse by those who have been more enthusiastic than wise in their announcements. A thing well done or a product well made certainly merits praise; but we question the wisdom of claiming too much for it. The public very quickly detects what one man very aptly, if inelegantly, termed "blah, blah". So, in view of what we have just said, we merely wish to announce that the forthcoming January, 1930, number of PHOTO-ERA MAGAZINE will contain material which we honestly believe will interest our readers, our dealers, and our advertisers. Furthermore, we hope that in that issue we can convey the assurance to all that we are making a sincere attempt to have something different, practical, human, and inspirational —even if it is a photographic magazine.

Just to Set Things Right

ON page 280 of our November issue appeared an item with regard to the activities of the Photographic Society of Philadelphia. The concluding paragraph refers to a birthday remembrance given by the members to John Bartlett, eighty years old, who has been a member since 1882. The account stated further that Mr. Bartlett "was for twenty-five years editor of *Camera Magazine*". This statement should be amended to read that Mr. Bartlett was an associate or contributing editor for twenty-five years. Mr. Frank V. Chambers has been the editor and the publisher of *The Camera* ever since its founding, over thirty years ago.

To Our Editors and Our Contributors

WE wish to take this opportunity to thank Mr. Herbert C. McKay, F.R.P.S., Mr. C. B. Neblette, A.R.P.S., Mr. Ernest H. Washburn, and Mr. Arthur L. Marble, our department editors, for their loyalty, support, and constructive co-operation during the past year. Their work has brought them small financial return, but much sincere appreciation from our readers in all parts of the world. Our contributors, too, have been loyal and constructive in their work, and we wish to thank them, one and all. Altogether, we have ever so much to be grateful for at this Christmas season of the year.

THE PICTORIAL EDUCATOR

ARTHUR L. MARBLE

Communications intended for the editor of this department should be addressed to him, at Utah State Agricultural College, College Hill, Logan, Utah.

Holiday Thoughts

In extending the season's greetings to all readers of this department, I wish to express my appreciation to you who have co-operated with the "Pictorial Educator" during the past year by contributing news, photographs, or other material which has increased its value to Photo-Era subscribers and readers.

The season of resolution-making will soon be at hand, and most of us will try to figure out ways and means of betterment for the coming year. We have already chosen one of the resolutions of this department, and that is to attempt to be of greater service to you. But unless we know your desires, little can be done for you personally. So, if you have any ideas or plans that you would like to see incorporated, send in the suggestions; and, if possible, they will be incorporated into the New Year's resolutions.

One of the worries of this time of year is the Christmas-gift problem. We have often heard the expression that the best Christmas-gift is the one that most expresses the sentiments and personality of the giver. Granting the truth of this, to him who believes in the entertainment and educative value of pictures, the gift-problem becomes greatly simplified. Nothing can express the individuality of the pictorial educator better than pictures or equipment to make pictures. You will have no difficulty finding in this general field something to please every age and fancy. From the illustrated books and toys for the babes to the movie cameras and projectors for the more advanced in years, there is a wide range of selection. And, perhaps, there is no gift that will be more deeply appreciated by your friends and associates than a photographic portrait of yourself or family.

The holiday-period should mark the high tide of the winter photographic activities; for then, if ever, the entire family is gathered around the hearth, and countless opportunities are presented for the making of group-scenes and movie scenarios to include father, mother, the baby, and big brother and sister.

And be it known that there is no better way of entertaining family, or civic or religious groups during the long evenings of the holiday-season than through the use of movies, still films or slides, that are devoted to the chief reason for Christmas—Our Lord. To users of the 16-millimeter projector there is available this season a new seven-reel film, *Christus*, which has its setting in the Holy Land. This is being offered by the Arc Film Company, 729 Seventh Avenue, New York City. For the user of the lantern-slide projector, there is quite an abundance of well-colored reproductions from masterpieces of painting that inspiringly depict the life of Christ. Rather notable is the series of colored photographs depicting the Passion Play of Oberammergau, from the wide collection of religious films of the Victor Animatograph Company, Davenport, Iowa. For engraved prints of great religious paintings to entertain and instruct the tiny tots during the Christmas vacation, you may be served by any number of reputable firms, such as Perry Pictures, Malden, Mass. There are no better ways of vitalising the history, meaning, and spirit of Christmas than through the drama of life as represented by plays and pantomimes, or through vicarious drama as given in still and motion-pictures.

A Happy Old Year for Pictorial Education

It has been said that more outstanding scientific inventions have been created within the past hundred years than during the previous thousand years—which may be debatable—but it seems beyond doubt that no year has witnessed such great and positive gains for visual education as the year 1929.

True enough, no stupendous developments comparable to the invention of the motion-picture have occurred; but a change, more subtle but just as real and perhaps as far-reaching, has taken place. This change has been the steady growth of public sentiment in favor of visual education. The great development of talking motion-pictures—both amateur and professional—has played no small part in creating a favorable attitude on the part of the public. It is a fact that people who never highly esteemed the inaudible movies as a tool of education have come to recognise sound-pictures as a great potential force for learning; and those who see greatness in the silent film see an even broader field and wider scope for educational service in the "talkies". Scientists regard this great fusion of sight and sound as an outstanding achievement; but they see in it the genesis of another on which they have already set their hearts—television—which is promised within the next few years, and which, if ever it is perfected, will infinitely expand the field of pictorial education.

The year 1929 witnessed an outstanding development in projection-equipment for school and publicity purposes; but this, possibly, was predicted last year, just as we can now safely predict great improvement in projection-equipment in the future. Naturally, there has been a great increase in the use of both standard and substandard motion-pictures for school and community use. This, too, was to be expected. Possibly, the surprising thing about recent developments has been the widespread recognition of distinct values in still pictures that are unique and unshared with any other pictorial form. It will be exceedingly interesting to watch this growing change in attitude toward the still picture. Certain it is that the rapid rise of the motion-picture has caused several of us to lose sight momentarily of many of the exclusive values of prints and lantern-slides.

Possibly no form of the still picture has made greater headway among educational circles than the still film, which is destined through its great economy and convenience to reach a popularity which few of us can conceive at the present.

Here are a few highlights in visual education within the past twelve months:

(1) Definite decision on the part of motion-picture producers to concentrate on talking-pictures.

(2) Publication of volume, "Motion-Pictures in the Classroom", by Dr. Ben D. Wood and Dr. Frank N. Freeman. This illustrated publication gives a com-

prehensive summary of the experiment to measure the value of motion-pictures as supplementary aids in classroom instruction. The experiments were carried on in 1928 with the financial support of Mr. George Eastman. Houghton Mifflin Company are the publishers of "Motion-Pictures in the Classroom".

(3) First issue of the *International Review of Educational Cinematograph*—official publication of the International Cinematographic Institute of the League of Nations.

(4) Invention by scientists of the Bell Telephone laboratories of a headphone to enable the partially deaf to hear sound-pictures. This last is merely illustrative of a large number of technical and scientific developments that have broadened the scope of pictorial education.

16-Millimeter Copies of Best 35-Millimeter Films Needed

ABOUT this time of year, a great many school officials are seeking educational films that have a sufficient touch of timeliness to make them suitable for classroom-programs or co-ordinated textbook lessons. A teacher may wish, let us say, to show to his students some pictures on the Pilgrims around the 21st day of this month, the anniversary of the *Mayflower's* landing in Plymouth Harbor. This teacher may find that "The Pilgrim Fathers" is the best educative movie available on the subject. But the teacher I have in mind has access only to the 16-millimeter projector—home-movie size—which is becoming more and more popular in the schools. He finds that the *Chronicles* are produced only in the 35-millimeter—standard theater size—so for that reason one of the best sources of classroom-films is closed to him. In view of this fact, will not the firms possessing educative films in the standard size have copies reduced to the 16-millimeter size for the benefit of the growing army that prefers the small projector for classroom-use? It seems that such a project should be eminently worth while from the manufacturer's point of view.

Department of Agriculture to Produce Talkies

MR. C. A. LINDSTROM, Associate Chief, Office of Motion-Pictures of the United States Department of Agriculture, writes this department as follows:

"We have not begun to produce talking motion-pictures as yet. We are awaiting the development of projection-apparatus which will be of a price-range within the reach of our county agents. Until this takes place, we do not plan to produce any talking-pictures except such as may be required for special use from time to time. Our experiments, therefore, are principally along the line of developing a projection-machine which will be cheap enough to permit our county agents to purchase them from their limited funds."

Some Excellent Still Films

I RECENTLY had the pleasure of reviewing the "Authors, Artists, Statesmen" series of still films, compiled by Dr. Eugene Francis Storke and published by the Visual Textbook Publishers, Inc., 212 West 11th Street, Los Angeles, Calif.

The series is not designed to substitute either the teacher or textbook, but to serve only as supplementary material. We are shown, in twenty rolls of film, biographies of famous artists, writers, and statesmen of three countries—England, France, and Italy. A number of the rolls deal with masterpieces of painting, sculpture, and architecture of the three countries.

From "The Pilgrims", one of the Chronicles of America Photoplays.
Copyright. By permission Yale University Press.

The Pilgrims say farewell to the "Mayflower" as it sails from Plymouth on its return voyage to England in April, 1621.

The syllabus readings accompanying the series are also the scholarly work of Dr. Storke, who has presented interesting facts in connection with each picture. The following is quite typical of the succinct readings: "GUSTAVE FLAUBERT, a noted novelist, was a physician who turned his attention to poetry which failed. His first novel met with wonderful success, but it made him unhappy—the critics hounded it down. It was abnormal, and so was he! Being afflicted with epilepsy, which put him in the degenerate class, he dwelt upon the base side of life."—From *General French Literature.*

Used with economy and wisdom, a roll of fifty still pictures could lend interest and variety to an entire course in art, history, or literature. The complete set of twenty rolls are packed in a case which closely resembles a well-bound book, with dimensions 10″ x 7½″ x 2″ (see illustration). Indeed, the entire series of approximately one thousand single pictures is but slightly heavier than my copy of Shakespeare's complete works.

While looking over the series, I was impressed with the fact that such pictures as these create thought relationships in a student's mind that can be obtained in no other way. One film in the English Literature series portrays John Milton playing an organ in the presence of Oliver Cromwell and members of his family. A student who sees and understands this picture will never forget that Milton is a contemporary of Cromwell, and the chances are that the student in reviewing the lives of either of these men cannot avoid recalling the particular relationship of the two men as depicted in the film. And there is no reason why lasting impressions and relations of this kind cannot be given students everywhere, provided too many pictures are not shown at one time.

I happen to know one college professor who utilises still films not only in the regular presentation of lessons, but makes them a central theme for examination-time. Part of the final test consists of having students look at pictures projected on a daylight screen and answer such questions concerning the pictures as "who" "what" "when" "where" or "why", depending upon the nature of the pictures shown.

The "Authors, Artists, Statemen" series are among the best still films I have ever seen, and they would form an excellent basis for a school or college library. They are distributed in the East by the Spencer Lens Co., Buffalo, N.Y., who carry a complete stock of still-film slides on many subjects.

Courtesy Spencer Lens Co.

SECTION OF SPENCER STILL-FILM

Courtesy Spencer Lens Co.

THE COMPLETE SET OF SPENCER STILL-FILM COURSES

THE MONTH IN APPLIED PHOTOGRAPHY

C. B. NEBLETTE, A.R.P.S.
Division of Photography, A.M., College of Texas

Remarkable Long-Range Aërial Photograph

An aërial photograph of Mount Rainier was made successfully from a distance of 227 miles this summer, by Captain A. W. Stevens of the Army Air Corps. This distance exceeded by more than fifty miles

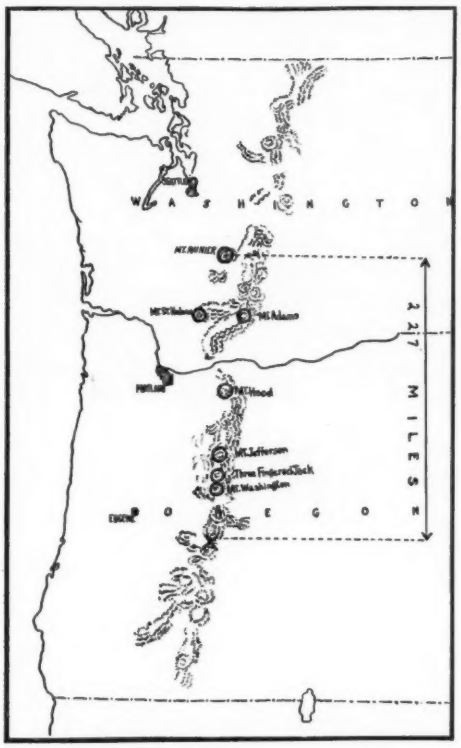


Figure 1. Showing position of mountains on map.

Captain Stevens' own previous record for long-range photography.

The success of the effort to increase the possible distance of picture-making was learned when Captain Stevens came to Rochester, N.Y., to discuss with scientists of the Eastman Kodak Company, the Folmer Graflex Corporation, and the Bausch and Lomb Optical Company various technical findings resulting from the experiment.

Mount Rainier is in the State of Washington. The picture was made from well south of the center of the State of Oregon.

Captain Stevens' 227-mile picture shows quite clearly mountains far beyond the distance that the eye can see. Even on clear days, the atmosphere contains sufficient haze to limit vision to much less than 227 miles; but the long-distance pictures were made on film sensitive to the invisible infra-red rays that penetrate smoke and haze. In the picture, Mount Rainier appears lower, because of the earth's curvature, than closer mountains with less height.

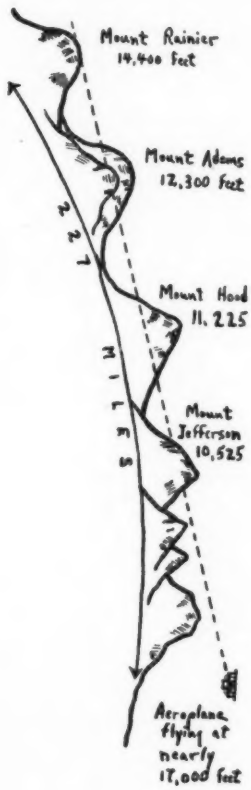
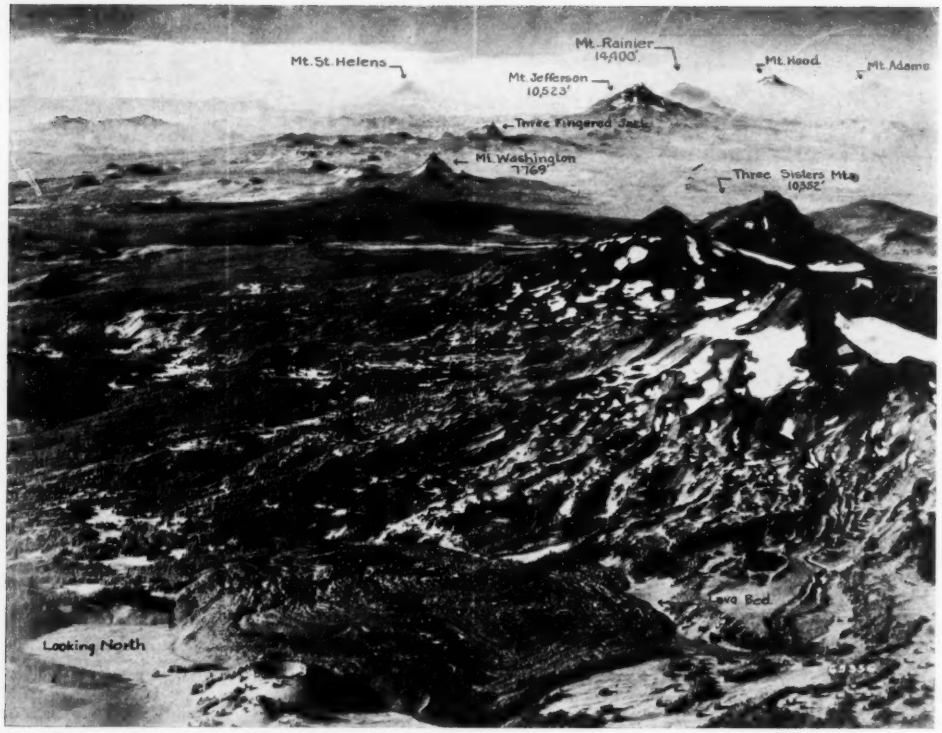


Figure 2. Diagram showing how the curvature of the earth affects the apparent height of mountains in the picture. Mount Rainier, which has a height of 14,400 feet, seems to have less altitude than Mount Jefferson, which is only 10,525 feet.



THE 227-MILE AERIAL PHOTOGRAPH CAPTAIN A. W. STEVENS, ARMY AIR CORPS

Because he could not see his objective, Captain Stevens was obliged, on the various days when he attempted the picture, simply to point his camera in the direction of Mount Rainier and then to await the development of his films to learn whether he had been successful.

The 227-mile picture was made in an airplane flying at an altitude of nearly 17,000 feet above a landmark that could be identified on a map. When the photographic negative showed that Mount Rainier had been recorded, the distance was measured on the map from the mountain to the landmark over which the picture had been made. Captain Stevens also made successful pictures from a distance of 214 miles.

Captain Stevens is head of the photographic branch of the Air Corps at Wright Field, Dayton, Ohio. His pilot on the trip to the West Coast for the long-distance picture experiments was Lieutenant John Corkille, also of Wright Field. The War Department authorised the expedition because of the valuable contributions to military photography that were expected to result.

In addition to the data on photographic science to be gained from the long-distance pictures, Captain Stevens thinks that they may yield important measurements relating to the curvature of light-rays around the surface of the earth; but these computations will require a good deal of time.

Also, he believes that eventually it will be possible to photograph Mount Rainier from even a greater distance with the same photographic materials he used. This year the heavy forest fires increased the haze in the atmosphere; but that obstacle could be eliminated by making pictures before the forest fire season begins.

The picture-making flights were made over very rugged forest country in the Cascade Mountains. The take-off field was at Eugene, Ore., about an hour's flight from the area where the photographs were made.

Captain Stevens and Lieutenant Corkille have several other aërial photographic achievements to their credit. The most notable was accomplished last winter, when they made a picture from an altitude of 37,854 feet, higher than a camera had ever been used before. In altitude photography, as well as in distance photography, it is necessary to use film sensitive to infra-red light because of the haze intervening between the plane and the earth.

[Aërial photography in the United States owes much to Captain A. W. Stevens of the Army Air Corps. His courage, technical ability and enthusiasm have brought military and civilian aërial photography from obscurity into a place of vital importance to science, industry and geographical knowledge. We hope that he will receive the honors and the rewards due the pioneer.—EDITOR.[

CAPTAIN A. W. STEVENS
AERIAL PHOTOGRAPHER, ARMY AIR CORPS

X-Ray Photography in Industry

ALONGSIDE the development of surgical and dental radiology, a corresponding development has taken place, but less rapidly, in what is termed by Kempton radiometerology and more generally industrial radiology —the examination of materials by X-rays. Progress in this field has been slower than in surgery and dentistry because of the greater transparency of the body as compared with industrial materials. The bones of the hand or head may be rendered visible by X-ray radiation which would not penetrate sheet copper or steel; consequently development in the field of industrial radiology awaited the production of high-power tubes and equipment. With the introduction of the Coolidge tube and the construction of more powerful tubes of that type, industrial radiology began to take form and has now developed into a field of definite and increasing importance. Although it is a comparatively new field, its applications have steadily increased both in number, variety, and industrial importance until it has become one of the most widely used methods of testing materials.

In all branches of modern industry, the necessity of extensive testing of both raw materials and finished product, so as to maintain a high standard of excellence, is being more and more widely recognised; competition, public demand, and, in some cases, laws demand a product of the highest quality, at least one meeting certain definite and established standards. In by far the greater number of cases, the time-honored tests of our fathers are inadequate and misleading and wholly unsuited to the processes and products of today. The axle which served for the one-horse shay will not serve for the motor car of today, and likewise the rough-and-ready test which determined the quality of the former would not be sufficiently accurate for the latter. So, newer methods of testing and examination, based on definite scientific principles, have been developed to meet the ever-increasing demands for greater and greater safeguards against defects. Quite an interesting story might be written of the history of methods of testing, from the times when visual examination and a few rough-and-ready tests determined the standard of a product to the present time, when the microscope, spectroscope, X-ray, and many other agencies are called into use; but the story of the development of science as related to industry must be left for other times and places.

As compared with other methods of examination and testing, the X-ray offers some very real advantages. Nearly all other methods of testing, whether by the use of the spectroscope, microscope, or by chemical analysis, depend upon the examination of representative samples, Valuable as may be the information obtained in this way, it is not and cannot be as satisfactory as the examination of the finished product by the X-ray. It is a very real advantage of X-ray examination that it may be applied to either the finished product or the unfinished product. Furthermore, an X-ray examination does not damage the product in the least, but enables one to detect any flaws of material or construction which may lie beneath the surface.

Not so long ago, the Ordnance Department of the Army wanted a steel casting of a certain size, shape, and weight to be made of a high-grade carbon steel for use as a "nose" on an 1100-pound aircraft bomb. The bomb is eight feet long and, when dropped from the air at the proper elevation, must penetrate at least a foot of concrete or a proportional amount of other material before exploding. Contracts for making these "noses" were let to certain companies. The specimens submitted appeared satisfactory from the outside, but X-ray photographs showed them to be filled with hidden cracks and blow-holes. In one case, there was an internal crack thirty inches in length, the presence of which could not have been detected in any other way except by the use of the X-ray. These defects were due not to inefficient and dishonest workmanship, but to the difficulty of producing a product which would meet the very exacting and stringent specifications laid down by the Department. Examination of the specimens submitted, however, enabled the experts of the Ordnance Department to select those which were free of defects; those which failed to meet the set requirements could be discarded, eliminating this source of uncertainty and guaranteeing a higher percentage of efficient bombs. The United States Arsenal at Watertown, Mass., does a great deal of X-ray photography of such subjects for the Government and also for private firms, as the law provides that iron, steel, and other constructional materials can be submitted to the Arsenal for examination upon payment of the costs of the investigation. Under this act, work has been done at the Arsenal for more than a hundred companies on various materials, including steel-rails for railroad systems, pipes and retorts for oil-refineries, valves and turbines of superpower plants, all kinds of welds, boiler-heads, and the like.

The X-rays are particularly valuable in most of this work because the product may be examined without affecting it in the least. How, except by the X-ray, for instance, could the efficiency of a weld in a turbine be examined and its soundness demonstrated? Yet it is frequently in just such places that failure occurs.

(*Continued on page 339*)

LONDON LETTER

CARINE AND WILL CADBY

ALTHOUGH ultra-modern artists may not like it, no doubt man has drawn most of his ideas of form in art from forms in nature. "Art-Forms in Nature", by Professor Blossfeldt, a big book recently published in London by Mr. Zwemmer, certainly bears out this contention. The many photographic illustrations of portions of plants given by the German professor have strong resemblance to things made and used by man, such as chair-legs, candlesticks, crosiers, cups, and many other articles worked in wood, stone, or metal. The simple imitative adaptations seen in the floral designs of printed fabrics, or even in many wall-papers, tell the same tale.

Of course, one should put it the other way, and say that all these things decoratively and often laboriously conceived, right down the ages, derive their inspiration from Nature. Carefully photographed from the right angle, the fleeting forms of plant-life can be as conventional as the severest design in metal or wood. In looking at many of these photographs, one has to remind oneself that they are not works of art but direct copies of Nature. That is to say, they are not designs evolved from man's brain with Nature as their original prompter, but direct photographs of living, growing plant-life. But such pictures as Professor Blossfeldt shows would not have been secured unless he had been an artist with the feeling for design strongly developed; for he has spied out Nature's patterns and emphasised them. We ourselves have tried coaxing flowers and weed-growths into decorative designs—leopard's-bane, common thistle gone to seed, and many grasses proving good models, if suitably lighted and posed; and we have been encouraged by the sale of some of these studies to professional designers for almanacs and other purposes. This book of Professor Blossfeldt is, for the photographer with a decorative bias, a very interesting and illuminating volume.

Most of our readers are probably too young to remember the old-fashioned ordeal of being taken to the professional photographers; but it was brought back to our minds rather vividly just lately when one of us had to undergo being X-rayed. Of course, there were differences; but one could not help being amused at the similarity in many respects between the modern X-ray procedure and the old-fashioned portrait-methods.

The "studio" was an eerie place, with very little good, wholesome daylight, and with a great variety of apparatus; and the "operator", naturally anxious to get the best results—or rather to discover work for the surgeon—fussed a good deal just like the portraitist of by-gone times. True, our heads were not screwed into a vice; but we were asked to recline on a cheerless sort of aluminium sofa, quite as uncomfortable and certainly as inartistic as any of the old properties. When all was ready, we were expecting the exhortation to "smile please"; but, instead, were told to take a long breath, which we conscientiously did to the rather alarming noise of loud buzzing—far more disconcerting than any lens-shutter—and the deed was done.

After this, we retired, hoping that our internal organs had posed satisfactorily, so that the life-size proof would not show any need for retouching or cutting out. But to hasten away from gruesome subjects, it is refreshing to think how things have moved on. Nowadays, a visit to the photographer is getting more and more entertaining, and the last device we have heard of is the installation of a small kinécamera to project pictures on the screen simply to amuse sitters and distract their self-consciousness.

If our Editor is not careful, he may find all his contributors deliberately curtailing their communications so as to leave space for just such a personal and sympathetic note as he has added to our letter in the September, 1929, issue of the magazine. Hands across the sea are conducive to international good feeling; but when hearts go flying as well on winged words, good feeling grows rapidly into friendship—friendship and understanding for those one has only met, so to speak, in print. Our hope is that one day we may "make" America and meet in the flesh those friends of long standing.

While on the subject of friendship, we should like to refer to a letter published in *The Times* recently, from an American who has been spending three months in this country; for we think that it is very illuminating to English people. He points out and proves by data that our insular idea of the universal "well-offness" of Americans is wrong, and contends that the majority have just as great a struggle as our people.

Although we, as a nation, do not take pleasure in the adversity of others, this statement certainly brings the Western World nearer to us, for it had become rather a settled idea here that we are alone in our long and arduous struggle with unemployment and bad times. When we realise that a considerable section of the great English-speaking nation across the water has difficulties and troubles similar to ours, our sympathy naturally goes out to them and in consequence they are brought much closer to us.

Our new airship R101, as it is at present called, is causing considerable interest and excitement. We in the west are kept informed of its doings by wireless; in fact, it is second only in news-value to the "star turn" of the meeting of the President and Premier in Washington, viewed here as *the* event of the year.

We have a friend living thirty miles from Cardington, where the R101 was born, and his great ambition was to get a good photograph of the airship as it first emerged from the hangar. He rose with the lark—or to be exact, somewhat earlier—on three consecutive mornings, only to find that there was nothing doing. On the fourth, in answer to a telephone summons, he was on the spot, as weather-conditions were favorable; and the huge gas-bag was walked out of its shell by four hundred men. He was surprised to find, however, what a difficult subject it was to photograph; and the last news we received suggested that the only thing he had managed to develop successfully was a crick in his neck!

There have been many photographs of the monster in the press, but none seem to give any idea of its impressive size. We had heard that, as it floated around St. Paul's Cathedral in London, it dwarfed the great building; but in the pictures, St. Paul's held its own, and it was the R101 that looked small and insignificant. The truth is probably that such a novel and abnormal apparition needs practice to photograph.

HERE, THERE AND EVERYWHERE

To ensure publication, announcements and reports should be sent in not later than the 5th of the preceding month.

Thomas A. Edison Made First Honorary Member of Academy of Motion Picture Arts and Sciences

WHEN the name of Thomas Alva Edison was inscribed as the first honorary member of the Academy of Motion-Picture Arts and Sciences, it was in formal recognition of the debt in which the motion-picture industry stands to the genius whose inventions pioneered many of the most important phases of motion-pictures.

The first honorary membership in the Academy was voted by the Board of Directors, Monday, October 14, 1929. Receipt of a telegram from Mr. Edison cordially accepting the membership was announced by William C. De Mille, vice-president of the Academy.

Without the labors and the genius of Thomas Alva Edison, it may be doubted if the motion-picture ever would have emerged from its swaddling clothes in the cradle of things unknown. His contributions to the art and industry of the kinema are numerous and fundamentally valuable.

In the order of their invention may be listed the incandescent light, used today both to illuminate motion-picture sets with a noiseless light and in a variant of its incandescence to record sound upon the picture-film.

Next must be listed the phonograph, the principle of which is playing so important a rôle in the talking-picture, in the preparation of the disc-records used for theater reproduction, and quite generally for "play-back" purposes.

Following these comes the kinetoscope, that basic invention on which every present-day camera and projector is dependent. Quoting from Terry Ramsaye's history of the motion-picture, it has been said: "There is not now, and there never has been subsequent to the year 1888, any motion-picture film-mechanism whatever of any relation to the screen art of today that is not descended by traceable steps from the kinetoscope."

Of prime importance in Mr. Edison's long series of contributions to the motion-picture is his diligent work in effecting synchronisation between phonograph and film. This was done in the arduous experimentation that covered the final months of 1889, and is a vital link in the chain of development.

"I believe that in the coming years by my work and that of Dickson, Muybridge, Marie, and others who will doubtless enter the field, grand opera can be given at the Metropolitan Opera House at New York without any material change from the original, and with artists and musicians long since dead."—Extract from Foreword of pamphlet issued by Edison Laboratory in 1896 and signed by Mr. Edison.

Although, unquestionably, Mr. Edison has collaborators in the evolution of the motion-picture projector, in that several persons—notably the Lathams, W. K. L. Dickson, Thomas Armat, and C. Francis Jenkins—contributed methods and processes, it is equally notable that the first projection of a motion-picture in an American theater was on April 23, 1896, by the "Edison Vitascope". And while refinements may have been made in both the motion-picture camera and the motion-picture projector, the principles of each as invented by Edison have been neither improved upon nor replaced.

Again, it was Mr. Edison who, while other experimenters worked with clumsy glass-plates in their efforts to produce pictures that simulated life motion, turned with conviction in the direction of "a flexible and transparent strip"; and it was in 1889 that he procured from a young camera-maker of Rochester, George Eastman, some of the film, invented by the Rev. Hannibal Goodwin, without which the present-day motion-picture could not have become such a tremendous factor in modern civilisation.

Further, as an indirect ancestor of the motion-picture, there is that strange discovery that lies at the root of the radio-vacuum tube, the so-called "Edison effect". This, described by Mr. Edison in a patent application filed by him November 15, 1883, lay dormant for forty years until called from the musty past to be a device that made radio itself a possibility.

To what extent Mr. Edison's labors in perfecting the telephone-transmitter have been responsible for the modern microphone, one of the three prime factors in talking-picture production, it is difficult to say, but that they have been vital is an acknowledged fact. [Academy of Motion-Picture Arts and Science, Frank Woods, Secretary.]

Film Exposed Seven Years Ago Yields Good Negatives

FILMS used in the common household Kodak appear to have an extended life; judging from the experience of T. A. Ovesen, 1224 Twelfth Avenue, Greeley, Colo.

Like many users of the box and film in place of the rod and gun, Mr. Ovesen did not pay any particular attention to his work and, after making pictures, was often likely to neglect them. As he rummaged about the house recently, he discovered an exposed roll of films.

"This roll of films must be more than two years old", said Ovesen to his wife. "Chances are that it is no good, but I guess I'll have Howard Riley develop it", he continued.

Ovesen went to the studio for his pictures. He found that the film had not died of old age and that the pictures were as clear as any others he had made under similar circumstances and had developed immediately.

He further found that in place of being two years old, it had been more than seven years from the time the pictures were made until the time the film was developed. Identification of the age of the pictures was made largely through snapshots of Alice Mae, daughter of Mr. and Mrs. Ovesen. She is now 13 years of age, but was only six when the pictures were made.

Other views on the roll included snaps of the Poudre River overflowing its banks during the spring freshet of 1922 and garden scenes at the Ovesen home.

Tribune-Republican, Greeley, Colo.

A Correction

On page 226 of our October, 1929, issue appeared an item which we quoted from the *Motion-Picture*, the official bulletin of the motion-picture organisation of which Mr. Will Hays is the head. This item referred to the seventy-fifth birthday of Mr. George Eastman and to his many philanthropies. Incidentally, the article stated that Mr. Eastman was responsible for the flexible film used in motion-picture machines. In order to avoid a possible misunderstanding of this statement, we believe that it is only just to remind our readers that, according to the records of the courts, the Reverend Hannibal Goodwin is the man who invented the original flexible film and in consequence should receive the credit due him for this invention.

We take this opportunity to thank those readers who suggested this correction in fairness to all concerned.

Your Mind and Health

Elbert Hubbard once attributed most of the ills of mankind to a mistaken effort to try to get more out of life than there is in it.

Certainly every living creature, including man, is endowed with an instinctive impulse to get all it can from its environment. By environment is meant everything not a part of the individual. This includes food, and with human beings also clothing, houses, automobiles, and—vitally important in this consideration—other individuals. Failure efficiently to adapt personality to environment means trouble, mental or physical.

Schopenhauer believed that happiness was not a positive thing; that it was the absence of pain and that health was the absence of disease. What, then, is disease? There are those who think it is purely mental in its cause and that even the effects are mental; there are those, on the other hand, who think that consciousness does not exist and that all the functions of living and thinking are purely physical. The truth seems to be that we cannot regard the mind and body as being separate entities, except for purely academic purposes. An individual is healthy when he responds as a whole efficiently to his environment. In psychology there is no need for taking up cudgels for one side or the other, just as it is unnecessary to deny the influence of environment on the race in order to support that of heredity.

The real test of sanity, according to George K. Pratt, M.C., assistant medical director of the National Committee for Mental Hygiene, is one's ability to get along in the community with the minimum of friction. Persons who are continuously in trouble with friends, associates, and people with whom they come in contact, are mentally disordered, if not diseased.

Pressure of affairs, especially in city life, often results in failure to adjust oneself to conflicting demands, and this may mean ultimate breakdown. In such cases it is quite obvious that mental and emotional attitudes can affect the success or failure of the enterprises in which we are engaged. But does not the quality and direction of thinking also affect diseases which are not commonly associated with thinking—such as tuberculosis, for example, known to be a germ-carried disorder? A moment's consideration will show the importance of mental attitudes in relation to tuberculosis.

As the death-rate from this disease among girls between fifteen and nineteen inclusive is nearly twice that of boys, we shall select a high-school girl as an example for the consideration of mental attitude in connection with ill-health. By the time she is fifteen, she may have been infected with the germs of tuberculosis—probably forty per cent. of girls that age living in cities have been. Fortunately, this infection ordinarily creates a relative immunity; but this immunity is constantly subject to being broken down. In the cases where active disease results, what seem to be predisposing circumstances? The girl is working hard at school, which consumes a great deal of her vitality; there should be no further great drains on it. Yet she cultivates the slender form by denying herself necessary, nourishing food. She is popular in her social circle and attends late dances, going without sufficient sleep in order to meet the requirements of the classroom next day. Unable to do all this and still fight the tuberculosis germs, her organism does what she would not do—it eliminates something from the program, withdraws resistance, and lets the germs prosper.

This situation is typically a failure to adjust efficiently to the environment, and it is truly mental in

THE 1929 CHRISTMAS SEAL

the sense that prevention of tuberculosis in such a case requires a modification of the desires and ambitions of the individual. There must be a recognition of the power of environment; a realisation that energy is exhaustible and must be renewed by rest, fresh air, and nourishing food—that youth is not omnipotent.

Such a case as this needs to be discovered in time, if effective preventive work is to be done. Facilities exist in many communities for observation of high-school students, boys as well as girls, and for finding those in danger of tuberculosis before the point of imperative and drastic action has been reached. Public health nurses, including school nurses, have been financed in many communities with money raised by Christmas seals. Work along the same line is being carried on by tuberculosis associations in the grade schools also, helping to inculcate health habits in the young which will form the right—by this is meant the effective—mental viewpoint, and drive home the fact that health depends on choosing courses of conduct compatible with effective functioning.

The Christmas seal sale itself is educational. Speakers who urge people to buy the seals also spread health information and knowledge. What the symp-

toms of tuberculosis are; that it is curable if taken in time; that periodic health examinations preserve health; that the tuberculin-test and X-ray are invaluable aids in the discovery of the disease in doubtful cases, especially among the young—these facts are becoming known to everybody who buys or who sells the Christmas seals in every town, city, and hamlet in the country.

Nothing has been said here of the physical side of the fight against tuberculosis—a subject having a multitude of interesting phases. It is hoped in this brief article merely to point out the importance of the mind in connection with health, and to emphasise the saying of the Sage of East Aurora—that we cannot get more out of life than there is in it.

DWIGHT S. ANDERSON.

[Good health is vital to good photography, whether in the field or in the laboratory. Care in ventilating the darkroom, and in keeping it clean, is not only good photography but good health.—EDITOR.]

X-Ray Photography in Industry

(*Continued from page 335*)

Often as not, the safety of human life depends on the soundness of a joint; and it is imperative, therefore, that the methods employed for investigation should be such as to enable the exact condition of the joint to be ascertained. This condition is more nearly fulfilled by the X-ray than by any other method of examination and testing.

Although industrial radiology has been employed to a greater extent, perhaps, in dealing with metallic substances, it is also used in the examination of many non-metallic materials. During the war, timber for use in aircraft was examined by the X-ray, as well as the assembled product. Bad internal fitting, splitting of wood by screws, irregular gluing and the like, due either to poor workmanship or unscrupulous workmen, could thus be detected and the product refused.

In the electrical industry, the X-rays have been used for the examination of insulating materials. In natural insulating materials, such as mica, veins of metallic substances are often found which seriously affect the insulating properties of the material. Examination by the X-rays also serves to disclose uniformity of composition in such synthetic insulating materials as Bakelite, ebonite, micanite, and vulcanite.

Now for a specific case: Not so long ago a huge generator which had been installed by a large public service corporation failed entirely in its preliminary test. The manufacturers attributed the failure to faulty installation and the Public Service Corporation to faulty construction. There was suspicion and doubt on both sides as the engineers of the manufacturer arrived. Careful examination showed that there was nothing wrong with the installation and in the end doubt settled in the insulation. But when examined this, too, looked all right. At their wits' end to account for the failure of the big generator, the experts decided to examine the mica insulation of the brushes with X-rays. When they did, the difficulty was soon solved. In some way, a small hairpin had got in between the sheets of mica that had been employed, and this was causing all the trouble.

The X-ray is applied to the examination of the textile fabrics used in the motor-tire industry. The fabric is impregnated with lead-chromate which is to a certain degree impervious to X-rays and does not unduly lower the tensile strength.

The ideal motor-canvas is one that is square when in the tire; *i.e.*, number of threads per unit distance equal, elongation of warp and weft identical and of equal tensile strength. Now, in the process of impregnating the canvas with rubber, unequal strain may be set up in the canvas. There may be a stretching of the fibers due to slipping of the fibers or strengthen- of the filters or alignment. Radiographs made after each separate treatment of making the tire show the the effect of that treatment on the canvas. The finished tire may also be X-rayed to determine the final state of the canvas. In this case, the film is held tightly to the inside of the type by spring clips and the X-ray tube on the outside normal to the plane containing the film.

Numberless such cases might be related; but enough has been said to show that the field of X-ray photography in industry is not one whit less important than its applications in surgery and dentistry.

Photographing the Sunrise on the Moon

THE first motion-pictures of sunrise on the moon were made at Princeton, N.J., on May 17–18, through the large telescope at Princeton University, by Dr. John Q. Stewart, Associate Professor of Astronomical Physics. The mechanism was designed by Mr. Robert Fleming Arnott, who is a native of Australia and now a consulting engineer at Upper Montclair, N.J. He was assisted by his son, Mr. Edward G. F. Arnott, a graduate student of astronomy and physics at Princeton, and Mr. Arthur L. Bennett, who has had experience of lunar photography at the Lowell Observatory in Arizona.

SUNRISE ON THE MOON

Describing this remarkably interesting feat in scientific kinematography, the *Princeton Herald* says: "When the film is projected, it discloses within the course of a few minutes what an astronomer views in twice as many hours of constant watching through a powerful telescope.

"Mr. Arnott's device consists of a Victor motion-picture camera, amateur size, using a 16-millimeter film, and driven by a special electric motor. The camera and the motor are supported in an aluminum frame which is fastened to the 'eye end' of the 23-inch

Princeton telescope. Thus the lens of the telescope, nearly two feet in diameter, is substituted for the usual lens of the motion-picture camera. An area of about 200 miles by 330 miles on the moon's surface is recorded. The audience sees a 'close-up' of the moon. It is as though they viewed its pitted surface from a distance of a thousand miles—instead of the normal 240,000.

"On one film the giant crater Copernicus appears in the center of the visible area. The mountain-walls which form the almost perfect circle of this crater, or 'ring plain', rise to two miles in height above its nearly level floor. The diameter of the circlet of peaks is fifty-six miles. The film discloses the slow variations in light and shade as the sun rises across these mountains. Because of the absence of atmosphere on the moon, there are no such graduated variations between darkness and light as exist on the earth—no twilight-band hundreds of miles in width. The film reproduces the contrast of the harsh light of the sunlit regions with the dense shadow of the contiguous territory where it is still night.

"As the phase progresses from new to full, the sunrise-line creeps across the moon at a rate of about nine miles an hour at the Equator. This contrasts with a corresponding terrestrial speed of over a thousand miles an hour. On the moon the higher peaks are fully illuminated half a dozen hours before the shadow retreats from neighboring plains.

"From the initial moment of dawn, when only a few summits reflect the sun, shining like stars in a background of night, until the time when the high sun penetrates into valleys and crevasses, there is continuous and fascinating change.

"The leisurely development of a lunar landscape at sunrise is one of the scenic marvels of Nature. The combination of motion-picture camera and telescope will, in time, make it easy for people generally to become acquainted with the spectacular topography of the earth's satellite.

"The picture of sunrise on Copernicus was made on Friday night, May 17, and Saturday morning, May 18, between the hours of 9.30 P.M. and 1.30 A.M., Eastern daylight time. (N.B.—Add four hours for Greenwich time.) The moon was nine days old, two days past its first quarter. The great ring-plain is then on the left-hand edge of the bright part of the moon, and its mountain-walls can be seen with good field-glasses. The motion-pictures were made at the rate of one every six seconds, or one hundred times slower than the usual rate. Consequently, when the film is projected, the sun is shown rising one hundred times faster than normal. Two thousand separate pictures are contained in the film of Copernicus, which is fifty feet in length.

"Since the clockwork on a telescope, which is designed to compensate for the rotation of the earth and to keep the instrument directed at any celestial object under study, is not sufficiently accurate for photographic purposes, it is always necessary to use supplementary manual means to 'guide' a telescope.

"Discussing the scale of the picture, Professor Stewart said that if New York City were on the moon, it might show as a discolored dot less than one millimeter across on the film, and as a hazy blur several inches in size on the screen.

"Of course, pictures of lunar sunsets can be made when the moon is waning, just as well as sunrises on the waxing moon. Mr. Arnott and his associates plan during the next year to improve their apparatus and technique." These remarkable films are of great educational value.

Could This Happen at a Photographic Exhibition?

DOUBTLESS many of our readers noted with much interest the following item which appeared in several newspapers:

"PICTURE HUNG ON SIDE BY MISTAKE
WINS PRIZE IN NEW YORK EXHIBITION"

"NEW YORK, November 9—Art is art, even if it is askew. Such was the deduction in art-circles here today when news leaked out about a mishap at the winter exhibition of the National Academy of Design.

"This annual show, which will open to the public at the American Fine Arts Society Building, 215 West Fifty-seventh Street, Tuesday, is a dignified affair, representing the traditional in art—the antithesis of those radical shows which the Society of Independent Artists put on for years on the roof of the old Waldorf-Astoria.

"This year, however, there came to the Academy show, as a candidate for hanging, a highly individualistic, esoteric canvas by a Provincetown artist. It was accepted by the jury of selection, made up of more than twenty members and associate members of the Academy. It was put in position by the hanging committee and received the coveted second Altman prize of five hundred dollars, after due study by the jury of award, made up of five full-fledged members of the Academy.

"Then the official photographer was sent for. He puzzled over the picture and concluded that something was wrong. Attendants were sent for and directed to take down the heavy canvas, which measures five by eight feet. This done, evidence came to light on the back of the frame that the painting had been hanging on its side.

"Hurried telephone calls went out to the chairman of the hanging committee and the jury of award and, finally, to the artist himself in Provincetown, Edwin W. Dickinson, who confirmed the photographer's theory that when the painting had received a prize it had been hanging on its side.

"Soon the joke leaked out, and it was reported that the painting had been hung similarly on its side in the 1928 Carnegie international exhibition in Pittsburgh in 1928, and that art-lovers then had suspected nothing wrong."

The reproduction of the painting in question was not conducive to our greater appreciation of this esoteric art, which appears to be held in high esteem at the National Academy of Design. However, we have our esoteric bi-gums and bromoils, and sometimes weird effects of light and shade; but so far as we know, they have always been approved or disapproved right side up, whether at Pittsburgh, Los Angeles, or London. Is it poetic justice, or a coincidence, that photography should have brought to light the fallibility of a jury of selection, composed of twenty, and a jury of award, composed of five, all members of the National Academy of Design?

A Perfect Mother

WE have heard mothers extolled from time immemorial. We have loved and praised our own mothers. We have recalled their never-ending love and devotion when we were little tots and dwelt with them under the same roof.

Contrast your own definition of "a perfect mother" with the one we quote: "A perfect mother doesn't let her cigarette ashes get into the baby's eyes."

Truly, indeed, the "old order changeth"!

The Boston Mail.

Can Any of Our Readers Beat This Record?

VERY often we are asked to suggest a type of camera which we believe will fill a certain requirement. In one case we may advise a reflecting camera, and in another, a vest-pocket equipment; again, a view-camera may seem to us to be the instrument best adapted to the work in hand. For the benefit of those readers who may wonder how cameras of the focal-plane, non-reflecting, folding type function in the field, we quote from a letter received recently from a subscriber, Mr. Charles J. Belden, Z-T Ranch, Pitchfork, Wyo. Mr. Belden has the following to say about the camera of his choice:

"You might be interested in knowing that the Palmos camera that I use was purchased in Germany in 1909 and has traveled over 50,000 miles on horseback with me. I claim that it has gone further on horseback than any camera or kodak in this country. I have carried it for twenty years in my saddle-pockets on my daily rounds on the range, whether I am working cattle, riding circle, branding, or doing the other things that are necessary in running a cow outfit."

If there are any readers who can equal or surpass this record of daily camera use, we should appreciate hearing of it. Such interesting facts are of value to prospective purchasers and to the manufacturers of the camera mentioned.

New York Institute of Photography Uses Movies to Teach

THE most modern method of teaching is by means of motion-pictures. The New York Institute of Photography, 10 West 33d Street, New York City, has fallen in step with other progressive institutions who use the motion-picture, and has added a series of interesting reels to its complete instruction-facilities. The value of the motion-picture for instruction-purposes has long been underestimated; but it is rapidly coming into its own these days. A student can acquire far more knowledge, in a shorter time, from movies than from any other form of instruction. The films used by the Institute have been carefully planned and worked out, with the photographic student in mind. Not only photography is used in these films, but animated drawings, where the student may actually see mechanisms and processes not visible to the human eye. The value of such instruction is apparent. "Learn photography by photography" may well be a slogan of the Institute; and it might be mentioned that this school is the first of its kind to make use of especially prepared films in its classrooms.

Much Information in Small Space

PHOTOGRAPHY is no longer an uncertain and trouble some hobby to those who are willing to adopt modern methods and materials. Many whose experience leads them to complain of disappointments and expense will be agreeably surprised at the increased pleasure and decreased cost which follow the adoption of methods explained in a new booklet, "Photography at Ease", just published by Burroughs Wellcome & Co. (U.S.A.) Inc., 9 and 11, East Forty-first Street, New York City.

The booklet, which is well printed and illustrated with many pages in color, is concise, yet packed with up-to-date information. It tells, not only the procedure to follow, but also gives the reason. It leads the photographer from the moment of exposure, through the various stages, to the finished picture, at the same time finding space to discuss special subjects such as direct-color work, panchromatism, and color-effects by toning, to name a few.

Every photographer will find much of interest in this booklet. The majority will appreciate its honest endeavor to smooth difficult paths, to make comfort in photographic manipulation a real thing, and to point the way to the achievement of better results. The sections on exposure and development are of the utmost value to beginners. These sections tell how the light acts upon the plate or film and how the latent image is converted into a visible image, thus explaining the actual purpose of exposure and development.

"Photography at Ease" is a sensible booklet, serviceable to everyone interested in photography. The booklet will be sent post free by the publishers to those who write for it.

Meeting of N. E. A. Dept. of Visual Education

ATLANTA, GEORGIA, was the scene of last summer's convention of the National Education Association where the Department of Visual Education enjoyed a very profitable session. Mrs. Anna V. Dorris, president of the Department, was in charge of the meetings and pointed out in her principal address the profound influence American motion-pictures are exerting on world-thought and ideals. Two points brought out by Mr. A. E. Aughinbaugh were particularly interesting. According to this speaker, all Ohio High Schools of five-hundred students or over are required by State law to install a motion-picture projector. Mr. Aughinbaugh believes that inasmuch as the two great cosmic urges are motion and light, the motion-picture as a form of communication is in no way inferior to language, spoken or written. Mr. J. A. Hollinger of Pittsburgh advocated the more intensive use of slides by making those slides which are really related to more than one subject serve in the presentation of several lessons. As many as ten different lessons, he said, may be illustrated by a single lantern-slide. Aided by the new slides, pupils in the Italian section of Pittsburgh were able to learn a record of seven elementary reading words in one day.

New F/3.5 Lens for Still Camera

A NEW Graf DeVry 2 F/3.5 Anastigmat Lens for the DeVry Still Camera has been brought out to answer the demands of the photographer who desires the more difficult pictures and pictures to be made under unusual conditions. The lens permits accurate focusing and a wide range of stops for varying light-conditions. It is interchangeable with the standard lens, which comes with the camera.

Movies Increased Interest in History 40%

SCHOOL-CHILDREN who learned part of their history by aid of special motion-picture films were found to learn nineteen per cent. more, and to remember twelve per cent. more than a comparison group without the movies. Furthermore, the movie children participated in classroom discussions ten per cent. more often and voluntarily read forty per cent. more supplementary history.

These experiments were reported by Dr. Daniel C. Knowlton and Dr. J. W. Tilton of Yale University. The movies taught 395 historical facts. When a few comparatively inconsequential incidents were eliminated from this array of facts, the children's scores in rapid learning rose even higher.—*Chicago Tribune.*

THE AMATEUR KINEMATOGRAPHER

HERBERT C. McKAY, F.R.P.S.

"Talk" or "Squawk"

A WELL-KNOWN engineer recently made the remark that there were not a dozen men in the United States who were really familiar with the problems encountered in talking-picture production and who were also familiar with the solutions of these problems.

Before saying anything about the difficulties which are met in the production of talking films, it is only fair to say that at least half of the poor quality observed in theaters is due to the fact that the projectionist does not understand the new equipment sufficiently well to enable him to get a satisfactory reproduction of the sound which is upon the film. This is not meant to be a statement to the effect that the original recording is perfect; but it certainly is an unquestionable fact that there is far more quality in the film than is obtained from it in the ordinary theater. Most of us have experienced the rather peculiar sensation of listening to a speech in which the enunciation was satisfactory, in which the sound seemed to be right; but despite these facts, it was practically impossible to understand what was being said. There are many reasons for this state of affairs, many of them rather too technical to be fully understood, but all of them directly concerned with the production of a certain image upon the film.

We all know that a sound-wave in air has two characteristics—its length, which determines the pitch of the sound, and its amplitude, which determines the volume of the sound. It is obvious that, if we are to have an electrical reproduction of any sound, we must have one in which both the length of the wave, which determines its frequency, and the amplitude, which determines its volume, can be faithfully interpreted in terms of electrical impulse. If we mount a small mirror so that it will not move of its own accord, yet so that it can be moved by the application of a minute force to it, we shall have the basis of a crude experimental oscillograph. The only thing necessary to complete the demonstration model is the application of power from the driving rod of a loud-speaker unit to the mirror. If we connect the loud-speaker unit to a radio-set and then throw upon the mirror the image of a very narrow beam of light, we can reflect upon the wall or upon a screen an enlarged image of the source of our narrow light-beam. As the mirror is moved by the loud-speaker unit, we shall find that the beam of light darts back and forth across our screen or wall in direct response to the electric impulses in the unit. If this unit is placed upon a table and we rap the table sharply while it is in operation, we shall see the image of the slit move in response to the electric impulse; and, at the same time, move in another direction in response to the mechanical impulse produced by pounding upon the table. If we encounter any static or interference in the radio-set which is feeding the unit, we shall see that this, too, has a very marked effect upon the path of the light-beam.

Such points demonstrate clearly a few of the simpler problems encountered by the sound-engineer of today. When we stop to consider that his light-beam is confined to a narrow strip of film about one-tenth of an inch wide, and that in this narrow strip he often records not only the sound he wants to record, but also such an array of trifles as extraneous noise, ground noise, carbon hiss from the microphone, a variegated assortment of crashes originating in the battery circuits, plus a very beautiful hum due to the A.C. current used in the amplifier, we can begin to appreciate the fact that his position is not in any sense a bed of roses. Such insignificant trifles are the things which make the difference between "talkies" and "squawkies." These difficulties, of course, are subject to correction in an obvious manner; but there is one thing which for some unaccountable reason has been neglected by a great many recorders. It can be easily understood that an imperfect image, such as would be produced by an imperfectly focused lens, could not reproduce the delicate variation in sound upon which the finest quality depends. So delicate is the focusing operation that it cannot be successfully done by visual means. On the contrary, an electrical measuring-device has been developed which is so sensitive that its entire range of reading lies almost within what would be called in visual work the critical point of focus. The whole secret of sound-reproduction, particularly by means of the "sawtooth" or variable-area method, is the production of an accurate photographic record of the frequency and amplitude of each individual component of the sound.

The action of the recording device can be easily understood if we place a ruler upon a sheet of paper which is lying upon a flat table. The ruler is weighted so that it will remain in position while the paper is pulled from beneath it. If a pencil is held in contact with the edge of the ruler and is moved backward and forward while the paper is being drawn from beneath the ruler, we will see that the pencil-track takes the form which is characteristic of the sound-track under discussion. Instead of the paper, we have a sensitive film. Instead of the ruler, we have a minute slit between the sharp edges of two pieces of metal. In place of the pencil moving backward and forward, we have a mirror rocked by electric impulse, which causes the image of the slit to move backward and forward across the face of the sensitive film. If we have a sound whose frequency is one thousand cycles per second, the mirror will rock one thousand times per second. If we have film moving through the camera at the rate of one foot per second, we shall have impressed upon this one foot of film one thousand sawteeth, if we may use such a term. If this sound of one thousand cycles' frequency was barely discernible at first, we will find that upon our film the indentation between the sawteeth is barely discernible. If the pitch of the sound remained the same, but the intensity increased steadily, we would see upon examining the film that the length of the sawteeth increase progressively.

Let us next imagine such a film in the process of reproduction. In this case we again use an image of the slit, which throws a very bright but extremely minute line of light upon the film. This line of light passes through the film into a photo-electric cell. Light falling upon a photo-electric cell does not create any change in the electrical circuit, but, if the light

which is falling upon the cell is subjected to any change, the change is instantly reproduced in the amplifying circuit as an electric impulse of certain degree and through the amplification it is reproduced as sound by the loud speaker. If we place in such a mechanism the piece of film which was described, we find that, at first, where the indentations are very shallow, we have a note of the same frequency as the original—namely, one thousand cycles; but it is so lacking in intensity that it can hardly be heard. Throughout the entire run of this film we have a series of light-interruptions occurring at the rate of one thousand per second. These interruptions are caused by the black teeth of the record successively obscuring the bright image of the slit upon the film. As long as the light falling upon the photo-electric cell is interrupted at the rate of one thousand times per second, we shall have reproduced in the loud speaker a note whose pitch is just one thousand cycles. When the teeth are very shallow, a light-change is not of great intensity; but, as the indentations increase in depth, we find that the cell receives a greater and greater shock at each interruption and consequently the volume of the sound increases proportionately.

If, instead of considering a single suspended note of one thousand times per second, we consider an ordinary complex sound such as human speech, we shall find that the reproduction is just as faithful as it was in the case just described. In fact, a piece of sound-record actually contains a visible analysis of the component parts which made up the original sound. The only requirement for making perfect sound-records is that the actual record upon the film shall contain no change or modulation, as it is known, except that which originated from the sound which entered the microphone. Every disturbance, every distortion of the sound-track must inevitably be reproduced as some kind of sound. When the sound-track contains nothing but a record of the original sound, perfect reproduction will be possible; but, as has been said, the men who today are able to produce a sound-track of this nature can probably be named upon the fingers of two hands.

Table-Top Animation

It is surprising that so few amateurs have tried animation. There is some idea current regarding this work which makes the uninitiated think it is exceptionally difficult. This is certainly untrue. Animation of great interest is very easy and may be successfully attempted by any amateur.

It is true that professional animation usually makes use of elaborate sets and properties, and that in such work models or dolls of complicated structure are used. It must also be borne in mind that such work is done for exhibition to the most unmerciful critic known, the general public.

Still, it is not intended to intimate that amateur animation should be crude. Quite to the contrary. There is a curious phenomenon involved in this work. Animation of any kind, and, in fact, all motion-picture work is made possible because the eye seeing one object successively in two positions interprets this as an indication that the object moves from one position to the next, and we actually see the motion even when it is non-existent. In order to prevent this illusion, the motion has to be very rough and broken. Because of this, it is easy to use the simplest toys for very successful animation.

For the first animation, it is only necessary to have a camera equipped with a half-speed adjustment, two or three lamps of five-hundred watts' power, and a few lead-soldiers or similar toys which may be purchased at a ten-cent store.

The lighting is the usual type, the principal light being placed at one side, in front and slightly above the subjects being photographed. The other is placed about twice as far away, at one side and in front, at about the level of the camera lens.

The camera is set slightly above the objects, so that a semi-bird's-eye view is obtained. This facilitates the use of simple backgrounds, as the base of the action, such as the table-top, can be blended into a plain background. As facility in the work is attained, the camera can be lowered to natural perspective; and backgrounds, either drawn or cut from periodicals, can be used to enhance the simulation of a natural scene.

There is no necessity for making the inter-exposure movements with too great exactitude, nor is it essential that the exposures themselves be limited to a single frame each. In fact, even in professional animation, two and even three frames are exposed upon each set-up, as often as not.

Before making the actual exposure, the entire action of each scene should be carefully rehearsed, special attention being given to the relative fractional movements imparted to each of the several objects which are being animated.

When the scene has been set up, and the action has been worked out within the limits of the field of the lens, the actual work may be started. At first, about a foot of film is exposed, then the camera is stopped, a slight movement made in the position of each object to be animated, and the release of the camera depressed and released as quickly as is possible. This will expose one or two frames. The objects are again moved slightly and the movement repeated. By operating the camera, which must, of course, be mounted upon a firm tripod equipped with pan-and-tilt top, with the left hand, and doing the animation with the right, it is possible to make sixteen exposures per minute, or to make a scene in as many minutes as the number of seconds required for projection. Thus a scene lasting twenty seconds upon the screen may be photographed in twenty minutes.

Animated scenes may be worked into real action-scenes with very interesting results, or entire playlets may be worked out in simple animation. There is never any question as to the interest with which such scenes will be viewed by your audience, and you will find the films retaining interest for a longer time than those of more conventional subjects.

Table-top animation provides a very fascinating and interesting occupation for the long winter-evenings, when otherwise the camera would be lying idle.

An Awful Mistake

Two brothers were being entertained by a wealthy friend. As ill luck would have it, the talk drifted away from ordinary topics.

"Do you like Omar Khayyam?" thoughtlessly asked the host, trying to make conversation. The elder brother plunged heroically into the breach.

"Pretty well," he said, "but I prefer 'Chianti'."

Nothing more was said on this subject until the brothers were on their way home.

"Bill," said the younger brother, breaking a painful silence, "why can't you leave things that you don't understand to me? Omar Khayyam ain't a wine, you chump, it's a cheese."

Contact.

MOTION-PICTURE SECTION

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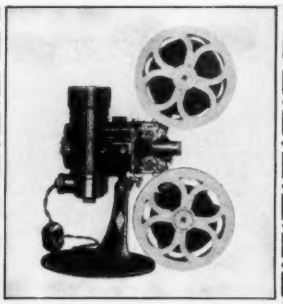

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